

THE QUANTITY AND QUALITY OF MARITAL
INTERACTION RELATED TO MARITAL SATISFACTION:
A BEHAVIORAL ANALYSIS

By

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Ann Marie Williams

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To Carl Clarke, who taught me about scientific objectivity
and research methodology...

To Mary McCaulley, who taught me about clinical intuition
and the psychology of women...

To Mark Kane Goldstein, who taught me about the applications
of behavior analysis and the psychology of men...

To Audrey Schumacher, who taught me about wisdom and
patience and grace...

And last,

To Greg, who taught me about interdependence and trust and
love...

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Abstract of Dissertation Presented to the Graduate Council
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By

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An investigation was done of the quantity and quality of time spent in husband-wife interaction by two groups of ten couples, one group from the general population of "happily married" couples and one group of distressed couples undertaking marital therapy. The study was limited to couples in their twenties, who had been married between one and six years. Five of the ten couples in each group had children. Each spouse recorded amount and perceived quality of time spent together on the Marital Satisfaction Time Line for 14 consecutive days.

Initial marital adjustment, communication, and social desirability response bias questionnaires were repeated immediately upon completion of the 14-day recording period to investigate potential reactivity of the self- and spouse-monitoring procedure. Participants were also queried as to their subjective reactions to the procedure and its beneficial/detrimental effects of their marriages.

The two groups were significantly different in the end-of-day ratings of marital happiness of both husband and wife. Highly significant differences were also found between the two groups in husband-wife agreement on rating of the quality of ongoing marital interaction, although there were no significant differences in agreement between husband and wife on the quantity of time they had spent together.

The idiosyncratic patterns of husband-wife interaction are described for each couple based on self- and spouse-monitoring of pleasant, neutral, and unpleasant behaviors, as well as daily and weekly interaction schedules and sequences. Dysfunctional patterns involving both "too much" and "too little" marital interaction time are described and discussed. It is proposed that simultaneous husband-wife monitoring of the duration, content, and quality of daily interaction sequences is a useful evaluative procedure for identifying the behavioral strengths and deficiencies of a particular marital relationship and may be valuable for studying the routine but essential day-to-day workings of marriages in general.

CHAPTER I
LITERATURE REVIEW AND HYPOTHESES

Introduction

Is the amount of time that a couple spends together primarily determined by "chance" and the effects of external forces or is it a function of the enjoyment and satisfaction derived from the relationship?

According to the reinforcement-attraction hypothesis, "we like those who reward us and dislike those who punish us" (Stuart, 1969, p. 675). Attraction and liking are said to be associated with the exchange of positive behaviors while repulsion and dislike are said to be associated with negative or coercive social exchanges. This formulation has been supported by Birchler's research (1972) in which the dyadic interactions of distressed and nondistressed couples were compared.

A corollary of the reinforcement-attraction hypothesis is that couples who are usually made happy by their interactions will arrange to spend more time together. The time spent together is increased or is maximized because it is associated with the mutual exchange and receipt of rewards.

It is postulated that couples must "work" to arrange time to be together and that the frequency and intensity of this marital work is a function of the ongoing reward/cost ratio in their interspousal interactions, as well as each partner's comparison level of alternative

sources of reinforcement (Thibaut and Kelley, 1959). This study proposed a behavioral methodology for the investigation of the relationship between the levels of marital happiness and satisfaction reported daily by the couples and the amount of time they record spending together. This behavioral methodology is also used for the identification of idiosyncratic patterns, both functional and dysfunctional, of husband-wife interaction.

In order to place the present study in historical perspective for the reader unfamiliar with the literature in this area, the recent article by Marini (August, 1976) is offered as an example of the research methodology in current usage. She chose to examine three variables characterizing the marital relationship: (1) marital satisfactions, (2) marital tensions, and (3) marital companionship. "Marital satisfactions" were determined by asking the respondents (married respondents but not couples) to read a list of 12 activities and indicate which ones they had done with their spouses in the past few weeks. "Marital tensions" were estimated by asking the respondents which items on a list of 11 items had been sources of friction during the past few weeks. "Marital companionship" was measured as follows (Marini, p. 444-445):

This measure was based on the amount of time, in general, the respondent reported spending with her or his spouse, as measured by a single question in the first wave interview, 'On the whole would you say you spend a lot of time, a moderate amount of time, or relatively little time doing things together with your (wife/husband)?'

It is hoped that the behavioral methodology demonstrated in the present study will offer a means for more precise and accurate measurement of these variables. As the review of the literature which follows will indicate, the relationships among the recorded quantity of interaction time, the perceived quality of husband-wife interactions, and the day-to-day

level of marital satisfaction have not previously been explored.

It is believed that, if the quantity of time together and the perceived quality of that time can be used to discriminate between happy couples and distressed couples on an hour-by-hour, day-by-day basis, then these parameters may be useful for both clinical evaluation of individual dyads and for the scientific investigation of the essential daily workings of marriages in general.

Quantity of Marital Interaction

Only one study was found which analyzed the quantity of time spent in various activities, including marital and family interaction. In his book, The use of time: Daily activities of urban and suburban populations in twelve countries, Alexander Szalai (1972) computed the time spent in daily activities based on records kept in 15 minute segments, broken down according to sex, employment, time of week, interaction pattern, and country. For example, on a workday, an employed man with children spends an average of two hours per day alone with his wife and .8 hour alone with his children. On his day off, he spends 3.3 hours with his wife and 1.7 hours alone with his children (Table 12; p. 142). While this study offers valuable information regarding the gross estimate of time spent in marital and family information regarding the gross estimate of time spent in marital and family interaction, no qualitative evaluation ("good, bad, or indifferent") is made nor is the quantitative data correlated with ratings of marital satisfaction.

Several studies were found which dealt indirectly or partially with the question of how much time couples spend in one-to-one interaction. In some cases, the studies were limited to the number of shared activities rather than time-together per se; in other cases, the studies were limited

to leisure time and/or leisure activities excluding the time and activities involved in home management, and other non-leisure behaviors.

In his dissertation, Orthner (1974) did an exhaustive review of the family leisure and recreation literature, focusing, in particular, on the role of leisure activities in marital adjustment. Four of the studies reviewed have some relevance to the investigation of the relationship between time-together and marital adjustment. Hawkins and Walters (1952) reportedly found that the total number of different kinds of activities enjoyed in the past year had little importance in determining the quality of family interaction. Benson (1952) was reported to have found "little or no relationship between the total number of common interests and adjustments in engagements and in marriage" (p. 34). Gerson (1960) found that the lack of congruency between the kinds of leisure activities the married college students enjoyed and what they actually did with their spouses was significantly related to dissatisfaction with their marriages. It was concluded that "it was not the amount of leisure that were important." The fourth study (Klausner, 1968) looked at the effects on the marriage of increased time for leisure (three months of paid vacation). According to Orthner, Klausner found that increased available time for leisure had positive effects on family interaction. Interestingly, the seven results quoted by Orthner (p. 35) had only two items specific to leisure or recreation. The other six reported changes in family interaction were nonleisure activities (doing family shopping, dishes, housekeeping, meal preparation, and doing chores with the children).

While the first three studies summarized suggest that quality of leisure time-together takes precedence over quantity of time or number of leisure activities, the fourth study points to the complexity of the

leisure-time variable and its relationship to marital satisfaction. Research is needed to analyze the many variables involved in marital interaction, especially in the relationship between nontask time (leisure or discretionary time) and the instrumental task time (nonleisure or compensatory time) and the respective level of satisfaction associated with each type.

Quality of Interaction and Marital Satisfaction

Three reports were found which are relevant to be the current investigation. In the first study, Orthner (1975) looked at "leisure" activities (individual, joint, and parallel) and their relationship to ratings of marital satisfaction over five periods of the marital career. Asking 442 married respondents to recall their leisure activities over a recent weekend, the author found joint activities to be most important in the early phase of married life (married 0-5 years) and in the fourth phase (married 18-23 years). In the early period, spending time in individual activities (without one's partner) adversely affected the husbands' rating of the marriage. In the later period, individual activities were not satisfying for the wives. Both husbands and wives reported that joint activities (interactive) and, to a lesser degree, parallel activities (proximity without interaction) were positively related to marital satisfaction. However, ratings of marital satisfaction in the middle years (married 6-17 years) were not significantly related to the three types of leisure activities. It might be argued that there is very little "leisure" for the husband and wife during this active child-rearing period. The importance of proximity and interaction during nonleisure time was not investigated by Orthner.

In the second study, Wills, Weiss, and Patterson (1974) examined the daily interactions of married partners in an effort to identify the instrumental and affectional correlates (both positive and negative) of marital satisfaction. In this study, "A Behavioral Analysis of the Determinants of Marital Satisfaction," 10 couples recorded pleasurable (P) and displeasurable (D) behaviors received over a 14-day recording period. These pleasurable and displeasurable behaviors were subdivided into those that were affectional (e.g., spouse made positive comment about my appearance) and those that were instrumental (e.g., spouse cooked a good meal or spouse balanced the checkbook). The criterion variable which was a global rating of marital satisfaction (Locke Marital Adjustment Score >100) was found to be significantly positively related to pleasurable marital behaviors and negatively related to displeasurable marital behaviors. Furthermore, it was found that the P's were exchanged at a more or less constant rate in the time the couples had spent together. However, the D's were neither related to length of interaction nor to the level of P's exchanged that day. The pattern of D's emitted by each couple each day was found to be idiosyncratic for that couple (couple signature) over a two-week period but not reciprocal on a daily basis. The analysis of these behavioral ratings made daily was found to correlate $R = .508$ ($p < .001$) with the global rating of marital satisfaction used as the criterion variable. While pleasurable behaviors of both types (affectional and instrumental) contributed to the satisfaction rating of the couple, the husbands weighted instrumental P's (cooking, housework, etc.) more heavily and the wives weighted affectional P's (compliments, approval, etc.) more heavily. In simplistic terms, the rating of a couple's satisfaction with their marital relationship may depend on "what she does and what he says about it."

While the analysis of marital satisfaction by Wills et al. contributes valuable information to our basic understanding of the marital relationship, the report is limited to the analysis of discrete behaviors which are assumed to be equivalent in the time and energy involved. Thus, a pleasant instrumental behavior by the husband (e.g., washing his wife's car; approximately 30 minutes) is equated with a pleasant instrumental behavior by the wife (e.g., cooking his favorite dinner; approximately three hours). Obviously some measure is needed which includes both the duration of the behavior or interaction and its value to the participants.

The third study for consideration is the report by Goldstein (1975) "Increasing Positive Behaviors in Married Couples." This study suggests a format which could be adapted for the investigation of both quantitative and qualitative components of marital interaction. In one of the case studies presented, Goldstein describes the use of a marital record system in which spouses "carry on an ongoing evaluation of each other's performance for some preset time interval." Using a kitchen timer set for a specified interval (e.g., 10, 30, 60 minutes), the couple rates time spent together as "plus" or "minus" at the completion of each interval. The couple summarizes this data as follows: "The lower section of the marital record is used as an end-of-day evaluation in which the spouses assess each other's total daily performance on a 20-point (10 positive and 10 negative) scale before retiring for the night" (p. 7). This procedure affords an opportunity for close inspection and intense analysis of time spent together which can be a valuable adjunct to marital therapy. However, the recording procedure is not without considerable response-cost to the couple involved. The following procedure is designed to be used for both gathering baseline, normative data about a couple and for gathering data on the effectiveness of other marital therapy procedures (e.g., communication skills training).

Hypotheses

A study was done comparing distressed and nondistressed couples in terms of the quality and quantity of time spent in husband-wife interaction. The relationship between amount of interaction time and the positive, neutral, and negative ratings of quality of that time, and the scores from the traditional global marital adjustment and communication scales were studied. The following hypotheses were made regarding the results of this investigation:

- I: Distressed couples are significantly different from nondistressed couples in the amount of total time spent in husband-wife interaction, i.e., they spend less total time together.
- II: Distressed couples are significantly different from nondistressed couples in the ratio of positive time/total time spent in husband-wife interaction, i.e., they spend less positive time together.
- III: Distressed couples are significantly different from nondistressed couples in the ratio of negative time/total time spent in husband-wife interaction, i.e., they spend more negative time together.
- IV: Distressed couples are significantly different from nondistressed couples and have a lower ratio of positive time/negative time spent in husband-wife interaction.

Secondary Hypotheses

- I: Marital communication scores will be directly related to amount of positive interaction time and inversely

related to amount of negative interaction.

- II: Distressed couples will spend more time in individual leisure activities and less time in joint and parallel leisure activities than nondistressed couples.

Additional Relationships Investigated

Additional analyses investigated the relationship between global retrospective data and the daily self-observation data. In particular, the reactivity of the daily recording procedure was examined by comparing the pre- and posttest results on the Locke-Wallace Marital Adjustment Scale, Revised, and Bienvenu Marital Communication Inventory, and Edmonds' Marital Conventionalization Scale and analyzing the debriefing Reaction Sheets completed after the 14-day recording period. Because of the exploratory nature of this study, no predictions were made as to the results of these analyses.

CHAPTER II

METHODS

The procedures followed in conducting this study are presented in the three major sections which follow. The first section contains a description of the two groups of participants, including the relevant demographic data, the sources of couple referral, the criteria for their inclusion in the study, and the criteria for exclusion of similarly referred couples from participation in the study. The second section provides a description of the instruments used, including the pretest and posttest questionnaires as well as the daily self-observation recording forms. Finally, the third section is a procedural overview which summarizes the steps followed in using these instruments in the collection of the data.

Participants

All of the couples participating in the study were required to be approximately between the ages of 20 and 30 years and to have been married more than one year but less than six years. Half of the couples in each group were to be childless, while the other half were to have at least one but not more than two preschool children. There was no restriction regarding second marriages providing the age and length of marriage criteria were met by the couple. There was no restriction as to race or national origin, although it was necessary that both partners be able to

read and write English in order to complete the questionnaires without assistance from their spouse.

Group I. The ten "happy" couples ranged in age from 20 to 34 years, and averaged 24.5 years. These couples had been married an average of 2 years 1 month, ranging from 1 year 5 months to 4 years 8 months. The five childless couples were younger (mean = 23.9 years) and had been married a shorter time (mean = 24.8 months) than the five couples who had children who averaged 25.1 years of age with an average of 44.4 months of marriage. There was very little difference between the parents and the nonparents in their ages at the time of marriage, namely, 21.3 years for the parents and 21.9 years for the nonparents. The demographic characteristics for each couple are presented in Appendix K.

Of the 20 happily married participants, 1 wife and 4 husbands were university students, and the remaining 15 participants were nonstudents. One couple was Latin American while the remainder of the couples were white native North American. All of the marriages in this group were first marriages.

In order to minimize the self-selection bias of having couples volunteer in answer to a published advertisement, it was decided to recruit the couples by phone using a person-to-person appeal. An alphabetical list of all the currently enrolled married students was used as a starting point, specifically, the middle third of the alphabet. The computer printouts containing the first and third sections of the alphabetical list were not available at the time of recruitment for the study. Every fourth person on the list was called until the necessary number of participants was found.

Each person was called in the early evening in order to maximize the probability of finding both spouses at home and to minimize the bias and response cost of calling the couple again after the absent spouse had returned or asking them to return the call. Approximately half of the calls were answered by the husbands which did not appear to influence the rate of refusal or agreement.

Each respondent was told that a study of the amount of time couples spend together was being conducted and that happily married couples, who were married more than one year but less than six years, were being sought. If the length of marriage was appropriate and if the couple indicated curiosity about the study or expressed an interest in participating, they were given the following brief description of what participation would involve:

Each couple will be asked to keep track of how much time they spend together for a 14-day period. On some specially designed forms, each partner will mark when they are together and whether the time was "good, bad, or indifferent." They will be given stamped, preaddressed envelopes to mail in the completed forms the next day. At the end of the two weeks, feedback will be available to each couple about its particular pattern of interaction. The pretest questionnaires require a maximum of 45 minutes. The posttest questionnaires take about one hour (prior to feedback) although the time for the second session will vary according to the number of questions the couple wants to ask. The purpose of the study is to find out how marriages work, especially happy marriages.

Approximately one couple in five responded affirmatively to the request for help with the dissertation research project. The refusals included the following general types: "we're not that happy;" "not enough time this quarter;" "he (she) doesn't want to do it with me;" "not interested;" and "nobody here by that name." Many couples expressed an interest in

the research topic but said they had been married longer than five years. They were asked if they knew any couples who were happily married but who had not been married that many years, in particular, couples who were not students. A list was generated of couples who were thus recommended as being happily married. Frequently the referring couple suggested something along the lines of the following as an introduction: "tell them I told you to call so they won't be paranoid." In many cases the referral couples had also been married too many years. However, these referral couples were able to recommend several other couples who were appropriate for the study and agreed to participate. It was noted that the happily married couples had friends who were likewise happily married, although they also knew some former classmates, friends, or relatives who were getting divorced. All of the couples expressed concern about the increasing divorce rate. The 10 couples who met the criteria for being included in the happily married group were asked at the pretest session why they had agreed to participate in this study. In general, the responses included: first, feeling that they have a social responsibility to help with research which might help alleviate the problems of divorce, especially since they were happy and might be able to help couples who were not happy; second, curiosity about their own marriages and how much time they spend together. All 20 participants in this group signed the consent form asking that their data be shared with their spouse during the feedback session.

Two couples who agreed to participate as happily married couples did not meet the criteria required of this group. In addition to referral as being happily married and mutual self-report of happiness in the relationship, the couples were required to score 100 points or better on the revised Locke Marital Adjustment Scale. In each of these cases,

one spouse scored above 110 while the other spouse scored 90 or below. The discrepancy in marital satisfaction suggested by the scores was confirmed during the pretest interview with each couple. These two couples completed the 14-day recording period and the posttest questionnaires, but were assigned to a midrange group and were excluded from the statistical analysis.

One additional couple was included in the therapy couples group. When they were called at random from the list of married university students, this couple had agreed to participate as a "happy" couple. They agreed ostensibly so that the husband could earn experimental credit for a psychology course. On the last day of the recording period, they asked to be referred for marriage counseling. The husband reported that he had been trying for several months to persuade his wife to seek counseling with him and saw this study as an opportunity to ease her into therapy since she found the experimenter friendly and nonthreatening. On the basis of both their pretest interview and the questionnaire scores which indicated serious relationship problems, they had already been screened from the happy couples group. With the unprompted request for referral for marital therapy, they were considered to have met the criteria for inclusion in the therapy couples group. On two month follow-up, it was learned that they were petitioning for divorce, although continuing in individual therapy with the counselor to whom they were referred.

Only one couple quit during the 14-day recording period. Although 10 days of data were received from the wife, the husband discontinued recording after three days, noting on his charts "no interaction." A week later he told his wife that he had stopped recording the previous

week and had contacted a lawyer to begin divorce proceedings. Since the daily data were incomplete and posttest data were unavailable, this couple could not be included in the analyses.

Since the criteria for discriminating between Group I and Group II included scores on the pretest Locke Marital Adjustment Scale (Revised), an analysis was done to certify that the two groups of ten couples were statistically different and presumably representative of the two ends of the marital satisfaction spectrum. A Fisher's Randomization of Maximum Z-Statistic (one-sided) was done using the pretest scores on the Locke MAS Revised, on the Edmonds MCS, and on the Bienvenu MCI. The two groups of husbands and wives were significantly different on all three of the measures ($p = .00002$) and it was concluded that the groups were constructed correctly for the analysis of differences between the groups in their marital interaction patterns.

Group II. The ten therapy couples ranged in age from 20 to 33 years, and averaged 25.5 years of age. These couples had been married an average of 3 years 5 months, ranging from 1 year 5 months to 5 years 10 months. The five childless couples were younger (mean = 24.1 years) and had been married a shorter time (mean = 22.8 months) than the five couples who had children who averaged 27 years of age with an average of 59.8 months of marriage. There was no difference between the groups in their age at time of marriage, since both groups averaged 22.2 years of age. The demographic characteristics for each couple are presented in Appendix L.

Of the 20 marital therapy participants, 4 husbands and 2 wives were full-time university students, 1 husband and 1 wife were part-time

community college students, and the remaining 12 participants were non-students. In the childless group, 1 couple and 1 husband had been divorced and remarried; in the group with children, only 1 wife had been divorced and remarried. The remaining 16 participants were in their first marriage.

Marital therapy couples were sought through the University Mental Health Service, the University Counseling Center, and the North Central Florida Community Mental Health Center. The private practice counselors who were contacted said they are rarely approached by couples in this age group because the young couples generally cannot afford their services. Several of the counselors at the agencies contacted noted that couples in their twenties seldom seek marital therapy for their first marriages unless the services are available without charge through the university or community college. Couples with children were felt to be more likely to seek marital therapy, although these couples were seen as delaying counseling as long as possible.

In order to minimize preselection bias, the referring therapists were asked to refer all couples in the appropriate age group, regardless of presenting marital problems. Therapists were specifically requested to disregard the variable of "time together" in considering a couple for referral. The only criteria for exclusion were acute marital and family problems involving potential suicide, homicide, or child abuse which would contraindicate the 14-day break in therapy during the recording period. The experimenter acted as an independent investigator in this study and had no contact with these couples as a therapist.

The criteria for inclusion in the therapy couples group were the following: pretest Locke Marital Adjustment Scale scores at or below

100 points; significant relationship problems discernible during pretest interviews in the home; and formal efforts to seek professional help and/or participation in marital therapy. Since a clear contrast between this group and the happily married group was sought, all of these criteria were required for each couple.

Six of the 10 therapy couples became participants in this study following agency intake procedures but prior to commencement of therapy. Six couples who had already been seen in marital therapy for several sessions were also referred for participation. Based on pretest interviews and questionnaires, three of these couples were found to have significant marital problems warranting continued therapy and inclusion in the distressed couples group. The other three couples were found to have made substantial gains during therapy and were therefore assigned to the midrange group. These couples reported that, while they had had serious relationship problems when they began therapy and were still working on a few sources of conflict, they both felt that they had greatly improved. This was supported by their test scores which placed them midway between the happily married couples and the more distressed couples.

Instruments

The following instruments were used in this study:

Background Information for Research Purposes

Marital Adjustment Scale by Locke, Revised by
Kimmel and Van der Veen (MASR)

Marital Conventionalization Scale by Edmonds (MCS)

Marital Communication Inventory by Bienvenu (MCI)

Marital Satisfaction Time Line by Williams and Goldstein (MSTL)

Leisure Activity Interaction Index by Orthner (LAII)

Daily rating of happiness with marital relationship (1-9)

Daily rating of happiness with work (1-9)

Daily rating of happiness with self (1-9)

Daily rating of spouse's happiness with him or herself (1-9)

A sample of each instrument is presented in the Appendix, along with a sample of each of the three informed consent forms used. The following four sections contain a description of each of the published questionnaires and its reported evidence of validity and reliability.

No tests of validity and reliability are reported for the daily recording and rating scales inasmuch as these are not considered to be indirect measures of either satisfaction or interaction. The MSTL is designed to be a diary or log of time-together over a continuous 14-day period. To the best of his or her ability, each spouse is asked to record time together, not to give an estimate or a sample.

The Likert-type daily rating scales ask for a subjective rating of an internal, nonobservable event, namely the experience of happiness or satisfaction, over the previous 24-hour recording period. This descriptive scaling technique is idiographic in that each person generates his own baseline.

While it might have been possible to obtain more accurate records and ratings of ongoing marital interaction by bringing an outside observer into the home, the ethical considerations for privacy and practical considerations for expense prohibited such an undertaking in this study. The couple's subjective experience (e.g., quality of time together) is unavailable for monitoring except through its behavioral manifestations.

An alternative methodology was developed which uses self-rating and recording procedures in which each partner's data is, in part, corroborated by the data of the other partner. Current evidence suggests that neither more objective nor more intimate information is needed in order to study on-going marital interactions (Wills, Weiss, and Patterson, 1974) or to make effective behavioral interventions (Williams, 1975).

Measurement of Marital Adjustment. Using eight original items with two items adapted from Terman and 19 items from the Burgess-Cottrell Marital Adjustment Form, Locke (1951) proposed a 29-item Marital Adjustment Test designed to discriminate between successful ("happily married") and unsuccessful (separated, divorced, and those in marital therapy). Straus (1969) summarized the evidence for validity of the test, including a corroborating study of Swedish couples by Karlsson (1951). No reliability measures were reported.

Later, Locke and Wallace (1959) published a shortened form of this test (15 items) which had a reliability coefficient of .90 computed by the split-half technique and corrected by the Spearman-Brown formula. The short marital adjustment test (SMAT) was reported to have validity since it was able to discriminate between a well-adjusted group whose mean was 135.9 and a maladjusted group whose mean was only 71.7. Higher numerical scores indicate higher levels of marital adjustment and, presumably, satisfaction. The level of adjustment of the groups was validated by extensive case data, divorce decrees, and peer ratings. The maladjusted group included 11 recent divorces and 6 separations. The well-adjusted group was composed of couples who were reported by close friends to be exceptionally happily married. Furthermore, the test's

ability to discriminate between the couples was supported by the minimal overlap in the range of scores of the two groups:

Only 17 percent of the maladjusted group achieved adjustment scores of one hundred or higher, whereas 96 percent of the well-adjusted group achieved scores of one hundred or more. (p. 255)

Kimmel and Van der Veen (1974) reexamined Locke's short marital adjustment test (SMAT), and factor analyzed the 23 items which had been significant in the original 50-item pool (Locke, 1951). As part of a larger study, the questionnaire was completed by 149 wives and 157 husbands from intact families with at least one child in school. A broad range of marital and family adjustment was found in the group of respondents which was drawn half from the clientele of a mental health clinic and half from contacts made through the schools. Although the possible range for total score was 48 to 138 for husbands and 50 to 138 for wives, the actual mean of the total scores for husbands was 110.22 ($SD = 16.28$) and for wives was 108.40 ($SD = 16.32$). Test-retest stability was measured in follow-up testing (after an average delay of 27 months) by remeasuring participants who were available for testing and had not received marital or family counseling in the interim ($n = 44$). For the unrotated principal factor, "presumably marital adjustment," the test-retest correlation was .76 for the husbands and .78 for the wives (Kimmel and Van der Veen, p. 59).

Using the principal axis factoring method with varimax rotations, Kimmel and Van der Veen identified three principal clusters of items: Sexual Congeniality, Compatibility, and Closeness. The sex differences which were found in the loading of these factors were interpreted as follows:

Taken together, these findings imply that overall marital satisfaction may be more related to sexual congeniality for husbands and to agreement and compatibility for wives. (p. 62)

Based on these findings, Kimmel and Van der Veen published a slightly revised version of Locke's Marital Adjustment Scale (MAS) which has the 23 most significant items with scores weighted to reflect current sex differences in patterns of responding. This was the version used in this study (see Appendix B).

Measurement of Marital Communication. The Marital Communication Inventory (MCI) by Bienvenu (1969; 1970) was used to assess level of husband-wife communication. The MCI, a 46-item self-administered questionnaire, gives a choice of four responses to each question, "Usually," "Sometimes," "Seldom," and "Never," which are scored from zero to three with the response most indicative of good communication given the highest score. For some items the "Usually" response is most favorable, for other items, the "Never" response is most favorable. The range of possible total scores is from zero to 144. The higher the total score, the higher and more satisfactory the level of marital communication is assumed to be.

The original form of the MCI (48 items) was given to 172 couples (1969). Forty-five of the present 46 questions were able to discriminate (at the .01 level of confidence using Chi square) between the upper and lower quartiles of the experimental group. Two cross validation studies support the validity of the current inventory: the mean score of the first group ($\bar{n}$ = 172 couples) was 105.78 which is consistent with the mean score of the second group ($\bar{n}$ = 60 couples; $\bar{M}$ = 105.68) and the mean score of the third group ($\bar{n}$ = 322 couples, $\bar{M}$ = 105.45).

A fourth group of couples ($\underline{n} = 410$) was tested to determine the mean scores for a younger group (ages 21-34). While the females had a mean score of 103.82, the males had a somewhat lower mean ($\underline{M} = 99.52$). Consequently, the mean score for the 410 couples (820 male and female respondents) was 101.67, which is lower than means for the previous three groups reported. Whether this lower mean is indicative of a lower level of communication among these younger couples or less bias toward socially desirable responses (or both) is not clear in this study.

These scores are consistent with those found by Williams (1972) in which 42 young couples were tested who were seeking a marital enrichment experience. On the pretest MCI administration, the husbands had an average score of 98.6, while the wives had an average score of 102.5. The mean score for all the couples was 100.6. This group of couples reported themselves to be "average, happily married" in order to participate in the enrichment programs. This was confirmed for the group in general by their scores on the Locke-Wallace (1959) SMAT. However, their marital conventionalization (MCS) scores indicated that the group was considerably more candid than the group from which Edmond derived his MCS means. This decreased tendency for social desirability response bias suggests that the MCI responses were conservative estimates of communication levels and minimally inflated by socially desirable responses.

Another validation study compared a group of disturbed couples ($\underline{n} = 23$) receiving marital counseling through a Family Counseling Agency with a comparable group of couples ($\underline{n} = 23$) without apparent marital problems. Using the Mann-Whitney U Test, a significant difference in marital communication was found in favor of the group without apparent problems.

A reliability study using a split-half correlation coefficient corrected by the Spearman-Brown formula revealed a corrected coefficient of .93 ($n = 60$ respondents).

Measurement of Social Desirability Response Bias. This copyrighted instrument is available from Family Life Publications. The Marital Conventionalization Scale (MCS) was developed by Edmonds (1967) in order to measure the extent to which a person distorts the appraisal of his or her marriage in the direction of social desirability. Edmonds believes that marital adjustment scales in general are heavily contaminated by conventionalization since impossibly "good" answers are assigned greater weights than possibly "good" answers. Furthermore, it is believed that the distortion of the responses is not conscious and deliberate; on the contrary, most of the assessed distortion consists of fooling oneself rather than trying to fool others. In Edmonds' study deliberate distortion would have been pointless since all the participants knew that their responses were completely anonymous.

The MCS has 15 True-False statements which give a possible score ranging from zero to 97. The higher the total score, the higher the level of conventionalization and the more the person responded giving "impossible" but socially desirable answers.

As the term "conventionalization" is used by Edmonds, the scale consists of a measurement in which the measuring instrument is an indicator of the variable in question, not an attitude toward the variable in question. The central validity question, consequently, is a matter of sampling representativeness with respect to the population of conventionalized reactions. If conventionalization items were randomly drawn from

such a population, one could infer representativeness when a sample of a given size correlated highly with another sample of the same size. The central question is whether an increase in the size of the behaviors being samples would yield a significantly different order and magnitude of total measurement scores. Since the short form (15 items) correlates over .99 with scores on the long form (34 items), it would seem that sample stability is attained with the 15 weighted MCS items. The content validity of the short MCS would, therefore, according to Edmonds, seem to be established for the populations of behaviors and subjects from which the sample was drawn. The population that Edmonds studied was all married students enrolled at Florida State University. The sample was selected using the random numbers table and the last two digits of the student numbers until 100 students had been selected and contacted. In this sample the mean score for the short MCS is approximately 34 with a standard deviation of 30. The scale scores were skewed in a positive (candid) direction due to the relatively large number of zero scores (viz., 16) obtained when the short scale was used.

Edmonds warns that the MCS should be sufficiently disguised to prevent subjects from telling by inspection that it is designed to measure conventionalization. Pursuant to this objective, the 15 items of the MCS have been interspersed with the 23 items of the Revised Locke Marital Adjustment Scale (MASR) (see Appendix B). In previous use of this combination of MCS and MAS (Williams, 1972), none of the participants voiced recognition of the MCS test, although several complained about some of the "stupid" or "impossible" questions.

Measurement of Interaction during Leisure Activities. Dennis K.

Orthner compiled the Leisure Activity Interaction Index (LAI) for his dissertation (1974) on the role of leisure in marital interaction. The LAI was designed to determine the proportion of leisure hours or discretionary time that was spent in individual, parallel, or joint activities with the spouse or others. The three types of activities were operationally defined as follows:

Individual: activities accomplished alone
(Author's note: neither proximity nor interaction)

Parallel: activities accomplished in a group or interpersonal setting but in which interaction is either non-existent or limited to reactions regarding the common stimuli that generates their group character.
(Author's note: proximity without interaction; e.g., watching television.)

Joint: activities which by their very nature require significant interaction among the participants for the successful completion of the activity.
(Author's note: both proximity and interaction)

The list of 92 activities compiled by Orthner was submitted to four judges known for their work in the field of leisure and recreation. A majority decision (three out of four) was required for the categorization of an activity. Of the 92 activities listed, all of the judges agreed on 57, or 62 percent of the activities; three of the four agreed on 30 additional activities (33 percent), and five (5 percent) of the activities received inconsistent responses. These five activities and four additional activities suggested by the judges were given to four other judges with the same instructions. Each of the nine activities received the required three out of four agreement from the judges, and a final total of 96 potential activities resulted (Orthner, p. 76). Thus, Orthner suggests that the LAI has demonstrated content validity since 95 percent of the items were agreed upon by three of the four judges knowledgeable in the

field of leisure.

Reliability of the LAII was tested by correlating the separate husband and wife reports of time spent with spouse. The correlation between husbands' and wives' shared hours was .87 ($p < .001$). A copy of this instrument is included in Appendix F.

Procedural Overview

As soon as a couple agreed to participate, an appointment was made for the pretest session. In most cases the session took place in the couple's home in the evening to make participation as convenient for them as possible, especially for the couples with children who would otherwise have needed a babysitter. For the three couples who had to commute a considerable distance to attend classes and/or work near the university, arrangements were made at their request to meet near campus (in my home). In a few cases, the referring therapists requested that pre- and post-testing be done in their offices and arrangements were made accordingly.

At the pretest session the participants in both groups were assigned code numbers and were instructed to avoid putting identifying information on the research materials other than on the initial Background Information Sheet.

During this session each participant completed the Background Information Sheet, the Research Release form (see Appendix G) the MASR, MCS, and MCI without consultation with his or her spouse. After completing the precoded questionnaires, each partner received a two-week supply of precoded marital satisfaction time-lines (MSTL) with written instructions and the four happiness rating scales attached (i.e., the scales for daily

rating of the marital relationship, work, self, and perception of spouse's happiness). Participants were asked to keep their self-observation data confidential from their spouses until the posttest measurement was completed.

The couples were furnished 14 pre-addressed, stamped envelopes so that their time-lines and rating scales could be sealed in the envelopes at the end of the day and mailed to me the following morning. This facilitated data return, confidentiality of data, and access to data for preparation of feedback information during the posttest session.

As soon as possible after they completed the 14-day recording period, the participants were given the Leisure Activity Interaction Index (LAII) to solicit estimates of time spent in individual, joint, and parallel leisure activities over the preceding weekend. For the completion of the LAII, they were given the time-lines for that weekend to refer to in making their time estimates.

Finally, each participant completed a Reaction Sheet (see Appendix J) regarding the experience of self- and spouse-monitoring of marital behaviors and feelings. The couples were encouraged to give their unvarnished reactions to participation in the project "since this may be a pilot project for a larger study involving many more couples. If the procedures are harmful or need to be improved, we need to know it now." Once this reaction form was completed, each couple was interviewed or "debriefed" regarding the positive and negative aspects of using the daily self-observation procedures (e.g., "How enlightening was the process? How time-consuming was it?"). Suggestions for improving the research materials and procedures were sought. The posttesting and

debriefing took approximately 60 minutes.

Once the posttesting and debriefing were completed, patterns of interaction shown by the time-lines and rating scales were made available to the couple per request on the "Release of Information to Spouse" form (see Appendix H). Marital adjustment and communication scores were made available in general terms, that is, "well above average, average, below average." Examples were given as to pleasant behaviors each spouse would like to have initiated or repeated, unpleasant behaviors to be avoided, and suggestions were given on ways to make the neutral times more pleasant for each partner. For couples in the therapy group, research materials were made available to their therapist and feedback was given in the presence of the therapist upon written request by both partners (see "Release of Information to Marital Therapist" in Appendix I). While the amount of feedback given varied according to the interest expressed by the couple, the presentation and discussion averaged an additional 60 minutes per couple. In seven cases involving both distressed and mid-range couples, written analyses and synopses of the data were sent to the therapists upon request.

CHAPTER III

RESULTS

Statistical Analyses

A Fisher's Randomization of Maximal Z-statistic (one-tailed) was used to test Hypothesis I regarding the total time together. This analysis is suited to multivariate two-sample problems (distressed versus non-distressed) with the advantages of being exact, nonparametric, and offering the option of one-tailed directionality, which is not offered by the multivariate analysis of variance (Boyett and Shuster, 1977; Chung and Fraser, 1958). The randomization was calculated to compare the happy couples with the therapy couples on eight variables:

- 1: Percent unpleasant time-together, reported by husbands;
- 2: Percent unpleasant time-together, reported by wives;
- 3: Percent neutral time-together, reported by husbands;
- 4: Percent neutral time-together, reported by wives;
- 5: Percent pleasant time-together, reported by husbands;
- 6: Percent pleasant time-together, reported by wives;
- 7: Percent no contact time, reported by husbands;
- 8: Percent no contact time, reported by wives.

The "no contact time" is the remainder found when the total time spent together is subtracted from the total amount of time potentiality available during the 18 hour recording period. For the purposes of this analysis, it is functionally equivalent to its inverse in comparing the

two groups as to total time-together.

The percentages used in the analysis were based on the data collected at home by the 40 participants during the 14 days of continuous recording on the Marital Satisfaction Time Line. This first multivariate Randomization was nonsignificant ($p > .10$) so that no further statistical analyses were done on the total therapy couples group to test Hypotheses II through IV.

However, behavioral analysis of the data revealed that two of the therapy group couples had spent extraordinary amounts of time together. When analyses of the variance within the two groups were studied using the ratios of two Chi squares (variance of parents and nonparents in Group II divided by variances in Group I), the F that was generated showed a significant difference ($p < .05$) between the variance in the happy couples group and the variance in the therapy couples group. The F's were calculated for husbands and wives separately, and again differences in variance were significant ($p < .05$). It was also calculated that 74 percent of the variance in the therapy group was accounted for by the two couples who spent inordinately large amounts of time together.

In summary, the therapy group was comprised of two types of couples: (1) eight couples who spent "too little time together" relative to the happy couples (i.e., over 14 days, an average of 4370 minutes per couple versus 5568 minutes per happy couple); (2) two couples who spent "too much time together" relative to the happy couples (i.e., over 14 days, an average of 8700 minutes per couple versus 5568 minutes per happy couple). In the initial analysis, the averaging of the data from the "too much" couples with the data from the "too little" couples resulted in an overall therapy group mean closely approximating the mean for the

happy couples group. The homogeneity within the eight "too little time-together" couples and the variance accounted for by the "too much time-together" couples indicate that these couples represent two distinctly different dysfunctional marital interaction patterns. Thus, it is not surprising that the original hypotheses were not supported since they omitted couples characterized by the second dysfunctional pattern. Both patterns will be described below in the behavioral analyses of the marital interaction data.

In order to better understand the first dysfunctional pattern, the overall Fisher's Randomization was recalculated comparing the eight "too little time-together" couples with the happy couples. Hypotheses I through IV were supported by the significant differences found between Group I and Group II ($p = .041$). There were 15,876 possible allocations in the randomization and 651 allocations had the maximal Z-statistic of 2.27 or higher. The individual variables tested and their corresponding Z-values are shown in Table I. While the total time-together and positive time-together were significantly higher for the happy couples, negative time was higher for the therapy couples only in that it made up a significantly larger portion of the time spent together than for the happy couples. On a daily basis, the happy couples spent an average of 6.6 hours together (including weekends) whereas the therapy couples spent an average of 5.2 hours together (including weekends). For the happy couples, 18.2 minutes were negative of the 6.6 hours together per day. For the therapy couples, 26.6 minutes were negative of the 5.2 hours together per day. The ratio of positive time to negative time was 15.3/1 for happy couples and 6.3/1 for the eight therapy couples (see Table I, Variable 8).

Table 1
Comparison of Happy and Therapy Couples
as to Ratings of Time Together
Based on Time-Line Records

Variable	Direction Predicted	Z-Statistic
1: Total Negative Time	Therapy couples higher	1.27 n.s.
2: Total Neutral Time	Two-sided	-.40 n.s.
3: Total Positive Time	Happy couples higher	2.24*
4: No Contact Time	Therapy couples higher	2.23*
5: $\frac{\text{Negative Time}}{\text{Total Time Together}}$	Therapy couples higher	2.27*
6: $\frac{\text{Neutral Time}}{\text{Total Time Together}}$	Two-sided	-1.57 n.s.
7: $\frac{\text{Positive Time}}{\text{Total Time Together}}$	Happy couples higher	1.94*
8: $\frac{\text{Positive Time}^1}{\text{Positive} + \text{Negative}}$	Happy couples higher	2.14*

* $p < .05$

¹The $\frac{\text{Positive Time}}{\text{Positive} + \text{Negative}}$ ratio approximates the Positive/Negative ratio in a form more easily used in calculations since $0 \leq x \leq 1$.

A third overall multivariate Fisher's Randomization of Maximal Z-statistic was calculated to compare Group I with Group II on 34 secondary variables. This multivariate analysis of variance is sensitive to Z-sided differences in each of the 34 variables or is a 1.72×10^{10} -sided test. Of the 63,504 possible allocations, only in one allocation was the maximal Z-statistic larger than the 2.61 which was the maximal Z-value for the 34 variables. Hence, the overall probability equaled $2/63,504$ or $p = .00003$. This overall multivariate test was calculated prior to individual calculations to avoid the possibility of experiment-wide error due to spurious associations from running 34 separate tests of significance (Bradley, 1968; Chung and Fraser, 1958; Shuster, in press).

Tests of the 34 individual variables were justified by the highly significant overall differences found between Group I ($N = 10$ couples) and Group II ($N = 10$ couples). Table 2 lists the 34 variables and their Z-values. Perhaps the two most important findings involve Variable 1 and Variable 18. In Variable 18, each of the time segments (72 15-minute segments per day over 14 continuous days) for each husband was matched with the corresponding time-segment for each wife. A comparison of husband and wife ratings was made as to time-together vs. time-separated as a measure of agreement on quantity of time together per couple. This analysis helps to separate possible husband-wife discrepancies in ratings of quality of time together from husband-wife discrepancies in ratings of quantity (together vs. separated) as an artifact of the recording procedure. Behavioral analysis showed the quantity of time-together (segment-by-segment) to be remarkably similar but not identical for each couple, allowing for a margin of recording error. Statistical analysis showed that the segment-by-segment husband-wife agreement on

Table 2

Comparison of Happy vs. Therapy Couples
on 34 Variables Involving Background Data,
Pre-Post Changes and Response Patterns

Number	Variable	Z-Value
1	Fleiss Kappa for Husband-Wife Agreement on Quality of 15-minute Segments (Happy couples > Therapy couples)	2.61***
2	Marital Status of Husbands' Parents (Married vs. Divorced or Separated)	0.42
3	Marital Status of Wives' Parents (Married vs. Divorced or Separated)	0.00
4	Husbands' Ratings of Parents' Marital Happiness	0.76
5	Wives' Ratings of Parents' Marital Happiness	0.51
6	Husbands' Pre-Post Changes in Marital Adjustment Scale (MAS) scores	-0.10
7	Wives' Pre-Post Changes in MAS scores	-0.75
8	Husbands' Pre-Post Changes in Marital Conventionalization Scale (MCS) scores	1.27*
9	Wives' Pre-Post Changes in MCS scores	-1.07
10	Discrepancy between Husband-Wife Pretest MAS scores (Happy couples more similar)	0.13
11	Discrepancy between Husband-Wife Pretest MCS scores (Happy couples higher and more discrepant than Therapy couples)	1.44**
12	Husbands' Pre-Post Changes in Marital Communication Inventory (MCI) scores	-0.28
13	Wives' Pre-Post Changes in MCI scores	1.07
14	Discrepancy between Husband-Wife Pretest MCI scores	0.04
15	Convergence in MAS scores between Husband-Wife from Pretest to Posttest	0.55
16	Convergence in MCS scores between Husband-Wife from Pretest to Posttest	0.42

* $p < .05$

** $p = .01$

*** $p < .001$

Table 2 (Continued)

Number	Variable	Z-Value
17	Convergence in MCI scores between Husband and Wife from Pretest to Posttest	-0.58
18	Segment-by-Segment Agreement between Husband and Wife as to Quantity of Time Together	0.62
19	Husbands' Leisure Time Alone or With Others but not With Wives (Leisure Activity Interaction Index)	-0.09
20	Wives' Leisure Time Alone or With Others but not With Husbands (LAII)	0.37
21	Husbands' Total Time Alone (LAII)	0.13
22	Wives' Total Time Alone (LAII)	0.75
23	Husband's Total Time Alone with Wife (LAII)	0.54
24	Wife's Total Time Alone with Husband (LAII)	0.94
25	Means for Husbands of Daily Rating of Marital Happiness (1-9)	1.38*
26	Means for Wives of Daily Rating of Marital Happiness (1-9)	1.84**
27	Means for Husbands of Daily Rating of Satisfaction from Work (1-9)	0.59
28	Means for Wives of Daily Rating of Satisfaction from Work (1-9)	0.31
29	Means for Husbands of Daily Rating of Satisfaction with Self (1-9)	0.25
30	Means for Wives of Daily Rating of Satisfaction with Self (1-9)	0.84
31	Means for Husbands of Daily Rating of His Perception of How Wife Feels about Herself (1-9)	0.86
32	Means for Wives of Daily Rating of Her Perception of How Husband Feels about Himself	0.49
33	Difference between Daily Rating of Husband's Perception of Himself and Wife's Perception of Him	0.28
34	Difference between Daily Rating of Wife's Perception of Herself and Husband's Perception of Her	-0.31

amount of time spent together was not significantly different between the happy couples group and the therapy couples group.

However, as shown by Variable 1 in Table 2, the two groups were maximally different ($p = .00002$) on agreement between husband and wife in the quality of the 15-minute segments over the 14-day recording period. Thus, while both the happy couples and the therapy couples agreed on when they were together, only the therapy couples disagreed on the quality of their marital interaction.

Variables 2, 3, 4, and 5 deal with each partner's parental role models in order to explore the relationship between parental marital status or perceived parental happiness and current marital happiness or distress. No significant differences were found between the two groups as to the perceived quality of parental marriages of either husband or wife. Many of the participants noted that their parents had "seemed happy," even though they had subsequently become divorced or separated.

Variables 6, 7, 8, 9, 12, and 13 test the differences between Group I and Group II as to the possible effects of the daily self- and spouse-monitoring on marital adjustment, social desirability response bias (conventionalization), and marital communication. It was found that the recording procedure did not significantly change either marital adjustment or communication scores from pretest to posttest.

However, husbands in the two groups showed an opposite and significantly different ($p < .05$) response bias on the marital conventionalization scale. At pretest the husbands in the happy couples group had scored significantly higher than the husbands in the therapy group by subscribing to "impossibly happy" descriptions of their marriages. The therapy husbands, in contrast, scored in the very low, very candid

range on this lie scale (maximum score = 97) which is consistent with their having already publicly admitted marital problems via entering marital therapy with their wives. As shown in Table 3, the inflated scores of the happy husbands dropped an average of 5.7 points, while the deflated scores of the distressed husbands rose an average of 3.3 points. The wives, who had had lower pretest marital adjustment scores than their husbands, showed a reverse (but nonsignificant) trend with the happy wives increasing slightly, while the therapy wives decreased slightly. These sex-linked patterns suggest that significant differences in responding between husbands and wives would be masked by studying only couples scores which average the individual husband and wife responses.

Variables 10, 11, and 14 examine differences in husband-wife scores on the pretest measures of marital adjustment, communication, and social desirability response bias. It was postulated that happy couples might have more similar scores while therapy couples might disagree more regarding their levels of adjustment and communication. It was found, however, that both happy couples and therapy couples agreed on the general state of their marriages as reflected in the global, retrospective questionnaires. This is contrary to the previously mentioned highly significant differences between Group I and Group II, that is, the disagreement found only within distressed couples as to the quality of specific segments of on-going husband-wife interaction (see Table 2, Variable 1).

Variables 15, 16, and 17 examine the effects of behavioral self- and spouse-monitoring on differences between husband and wife scores on traditional marital questionnaires. It was postulated that differences of opinion between husbands and wives would be diminished by the 14-day

Table 3

Comparison of Happy vs. Therapy Couples,
Subdivided by Parental Status,
on Three Marital Assessment Questionnaires

Group and Parental Status	Spouse	Number	Marital Adjustment			Marital Conventionalization			Marital Communication		
			Scale Scores			Scale Scores			Inventory Scores		
			Pre	Post	Change	Pre	Post	Change	Pre	Post	Change
I	H	5	115.2	117.6	+1.0	43.0	40.4	-2.6	111.2	109.2	-1.4
	W	5	119.8	120.8	+1.0	41.2	46.0	+4.8	115.0	115.0	0.0
	H	5	116.6	115.8	-0.8	26.2	17.4	-8.8	99.0	99.4	+0.4
	W	5	109.6	111.6	+2.0	15.8	25.4	+9.6	101.0	106.2	+5.8
	Means		116.7 ^a	116.8	+0.1	34.6 ^{a,d}	22.9	-5.7*	105.1 ^a	104.6	-0.5
II	H	10	114.7 ^b	116.2	+1.5	28.5 ^{b,d}	35.7	+7.2	108.0 ^c	110.9	+2.9
	W	10	90.0	86.2	-3.8	11.2	9.4	-1.8	84.4	80.2	-4.2
	H	5	81.8	84.0	+2.2	8.2	1.2	-7.0	79.8	73.2	-6.6
	W	5	76.2	81.0	+4.8	4.2	12.6	+8.4	63.8	70.0	+6.2
	Means		76.0	84.8	+8.8	6.2	7.2	+1.0	67.0	71.6	+4.6
	H	10	83.1 ^a	83.6	+0.5	7.7 ^{a,d}	11.0	+3.3*	74.1 ^a	75.1	+1.0
	W	10	78.9 ^b	84.4	+5.5	7.2 ^{b,d}	4.2	-3.0	73.4 ^e	72.4	-1.0

^aPretest Group I Husbands vs. Group II Husbands: $p < .001$

^bPretest Group I Wives vs. Group II Wives: $p < .001$

^cPretest Group I Wives vs. Group II Wives: $p = .01$

^dHusband-Wife Discrepancy, Group I vs. Group II: $p = .01$

* $p < .05$

self-observation period, even though the couples had been instructed not to exchange their time lines or give specific feedback on the daily records. Statistical analysis showed that the behavioral recording procedure made no difference between groups in making husband-wife marital adjustment scores, marital communication scores, or response bias scores more similar (convergent) or less similar (divergent).

Since this procedure was designed for use in clinical practice as well as research, statistical analyses of group differences were not considered sufficient evidence of the effect on individual clients or couples. Some clinicians may ask "Do some couples get hurt by the recording process? Or are they helped by focusing their attention on pleasant aspects of the relationship which distressed couples tend to overlook?" Case by case analysis of the marital adjustment scores showed 9 of the 10 happy couples either gained slightly on posttest or remained the same. Only one happy couple decreased when the wife lost 11 points on her MAS score and 11 points on the MCS lie scale score. Of the 10 therapy couples, six couples gained on MAS with three couples converging between husband and three couples diverging. The one therapy couple that had a 10-point drop for both husband and wife on MAS also showed a 10-point drop for each on the MCS lie scale. Only one therapy couple showed a MAS loss and divergence, but the change was -1 point for the wife and -5 points for the husband which is well within test/retest error.

In summary, the recording process is informative and appears to be beneficial rather than harmful. It may be particularly helpful for couples in therapy who have reached a plateau and are denying or minimizing specific problems that are apparent to the therapist when he or she observes their interactions. It was noted that many of the therapy

couples rated the lack of arguments or the absence of embittered silences as relatively "pleasant" interaction. This was in sharp contrast to the happy couples who listed specific positive behaviors during their mutually pleasant interaction intervals.

Variables 19, 20, 21, 22, 23, and 24 in Table 2 examine differences between Group I and Group II in their use of leisure time. None of the Maximal Z-Statistic tests for group differences were significant in the analysis of data collected using Orthner's Leisure Activity Interaction Index (LAI). If a difference in the use of leisure time does in fact exist, several factors may have contributed to the masking of the differences in these data. First, the number of participants in this study is small so that an effect would have to be strong to be found by statistical analysis. Second, a fourth interaction category ("with spouse") was added (by permission) to the three categories originally used by Orthner (see LAI in Appendix). Many couples reported difficulty in remembering time spent "with spouse" (i.e., marital interaction) as discriminated from time spent "with spouse and others" (i.e., family interaction) which included their child or children. And third, case by case behavioral analysis suggests that certain types of leisure activity were interpreted and recorded differently within the same couples. Obvious discrepancies between the husband's estimates of leisure time together and the wife's estimates were found in categories like "watching television," "visiting friends or relatives," and "listening to records or tapes." In some cases, it was reported by one spouse that the couple had watched television alone together for 10 to 20 hours over the weekend. The other spouse reported only 3 to 5 hours of television viewing alone together, explaining that he or she had left the room without the

partner becoming aware of the absences. Likewise, in several cases, time reported as being spent with spouse and in-laws or parents by the husband was reported as "time with other but not spouse" by the wife (that is, "When 'we' visited my parents, he watched sports on TV all afternoon.")

The common element in these situations is that the marital interaction is diffuse rather than intense or face-to-face. In intense interaction between husband and wife, the interval ends when either partner leaves the room, leaves the house, goes to sleep, or otherwise makes himself or herself unavailable for continued interaction. In diffuse interaction, on the other hand, since the attention is shared by the spouse and other people or things, the spouse's absence does not usually end the group or pseudo-group activity. When attention is diffused among several stimuli in addition to the spouse (e.g., children, parents or in-laws, friends, and television programs and commercials), it becomes difficult to remember how much time was spent attending to which stimulus. The mass media, in this case, act as pseudo-group activities in which the viewer, listener, or reader can passively attend to stimuli without having to reciprocate the communication. In one case the couple rated the quality of their marital interaction according to the quality of the TV programs they watched together.

Many of the participants in this study reported spending large amounts of their weekend time in group or pseudo-group activities in which their spouse was present but not essential to the continuance of the activity. This type of diffuse interaction was found among both therapy couples and happy couples and did not appear to be significantly more prominent in either group. The LAII used to quantify time spent in

leisure activities was apparently not precise enough to avoid problems of interpretation and reporting within couples. It is suggested that more stringent definitions of types of leisure interaction are needed in order to study this important and expanding segment of the marital relationship.

The means for variables 25, 26, 27, 28, 29, 30, 31, and 32 are presented in Table 4, with subdivisions both for level of marital functioning and for parental status. As reported in Table 2, no significant differences were found between Group I and Group II in daily ratings of work, self, and perception of spouse's happiness. However, differences between the happy couples and the therapy couples were significant for the daily ratings of the marital relationship ($p < .05$ for husbands; $p < .01$ for wives). On a day to day basis, the happy couples rated their marital relationships higher on a scale from 1 to 9 than did the therapy couples.

On the overall marital happiness rating scale from 1 to 9, the midpoint was 5. During the 560 collective recording days in this study, couples who reported no interaction on a particular day rated marital happiness for that day as a 5 or the midpoint. Ratings below 5 required the presence of neutral and/or positive interaction. The full range from 1 to 9 was represented in the daily ratings. Individual patterns will be discussed in the behavioral analyses.

There was a greater difference between the ratings of the happy wives and the therapy wives (1.1 point difference in means; $p < .01$) than between the ratings of the happy husbands and the therapy husbands (.9 point difference in means; $p < .05$). While Azrin, Naster, and Jones

Table 4

Comparison of Happy vs. Therapy Couples,
Subdivided by Parental Status,
on Means of Four Daily Ratings (1-9)^a

Group and Parental Status	Spouse	Number	Rating of Marriage	Rating of Work	Rating of Self	Rating of Perception of Spouse
I	Without Children	H	7.14	6.20	6.62	6.21
		W	7.07	5.63	6.32	6.86
		5				
	With Children	H	7.06	6.22	6.40	6.88
		W	7.26	6.72	6.75	6.90
		5				
II	Means	H	7.10*	6.21	6.51	6.54
		W	7.16**	6.18	6.54	6.88
		10				
	Without Children	H	5.84	5.16	6.13	5.78
		W	5.87	5.88	5.73	6.49
		5				
II	With Children	H	6.57	6.82	6.65	6.44
		W	6.24	6.12	6.43	6.64
		5				
	Means	H	6.20*	5.99	6.39	6.11
		W	6.06**	6.00	6.08	6.56
		10				

^a 1 = Very unhappy or bad; 9 = Very happy or good.

* $p < .05$

** $p < .01$

(1973) had used a similar daily rating scale of overall marital happiness to measure the effectiveness of reciprocity counseling, comparing pretest with posttest and follow-up evaluations, this is the first use of daily ratings which shows their ability to discriminate between happy couples and distressed couples entering marital therapy.

While the happy couples tended to rate their work and their satisfaction with self higher than did the therapy couples, the group differences were not significant. During the debriefing interviews, the spouses in the therapy group were asked about job satisfaction and personal happiness. The general consensus was that, as they spent fewer hours in marital interaction, the unhappy partners invested more of their time and energies in their work and independent social lives. The seriously distressed social activities as proof of their personal value and as a counterbalance to their lack of success as a marriage partner. Most of the therapy group mothers emphasized how diligently they were working to compensate their children for the disruption and insecurity caused by the marital strife and discordant home environment. The theory of comparison level of alternatives suggests that, as husband-wife interaction becomes less enjoyable and rewarding, other sources of rewarding social interaction including parenthood become more attractive.

The graph in Figure 1 shows the differences between happy couples and therapy couples in the cumulative ratings of quality of time spent together. The graph also shows the differences between parents and childless couples in each group. The happy couples who were childless showed the maximum positive time-together and minimum negative time-together (excluding the "too much time" couples) with a positive/negative

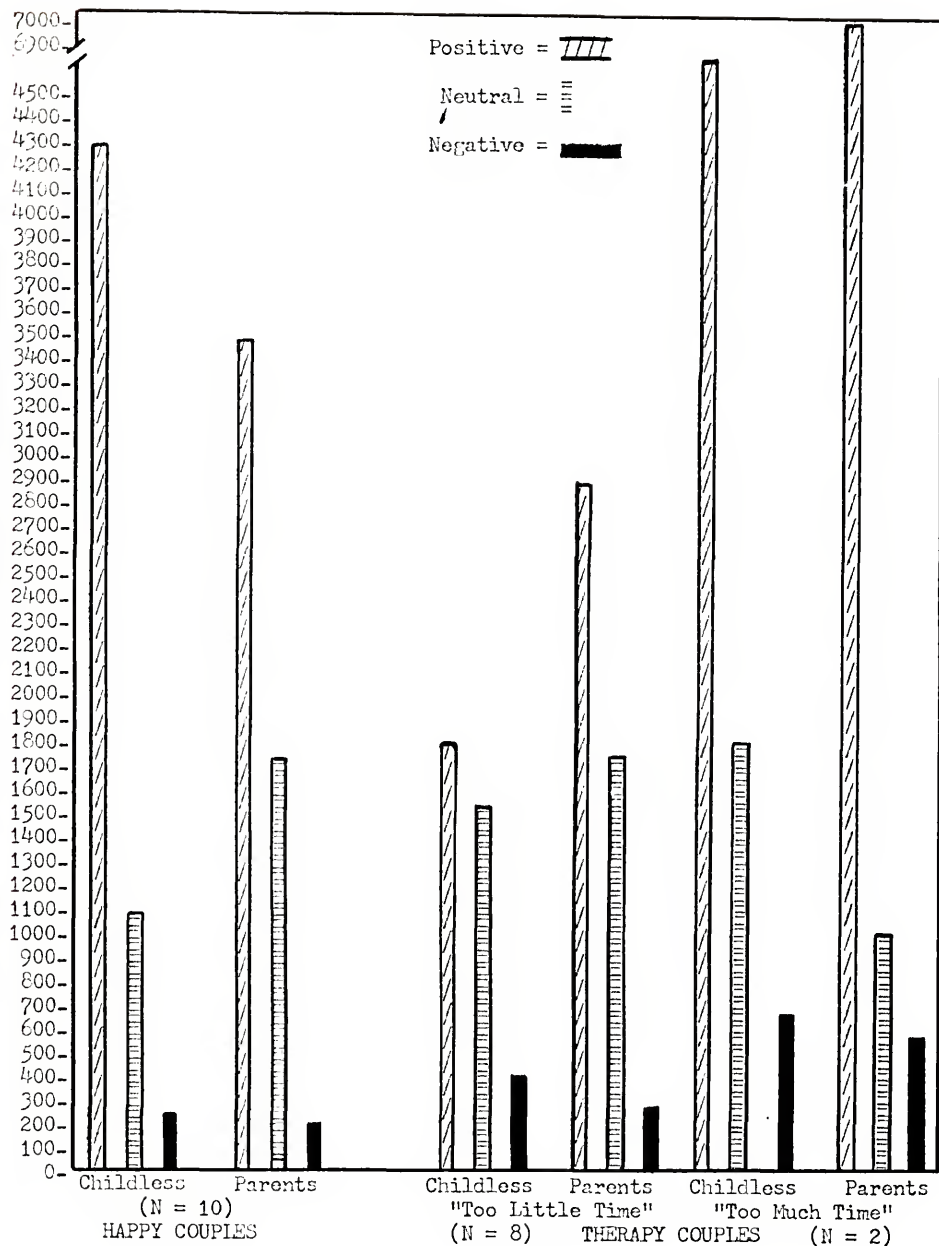


Figure 1.
 Ratings of Time Together by Group and Parental Status
 (Total Minutes Over 14 Days)

ratio of 16 to 1. The happy couples who have children showed less positive time, more neutral time, and slightly less negative time. The positive/negative ratio was 14 to 1. These couples described more of their time as taken up with routine childcare responsibilities so that they had less time and money available for dinner in restaurants, going to movies, attending athletic events and parties with friends. Some of the parents were apologetic about rating their time together as neutral because it was time spent in family interaction rather than in marital interaction. They explained that feeding and bathing a cranky toddler could not be considered pleasant ("something you want more of"), yet did not warrant an unpleasant rating ("something you want less of or none at all") either. It was obvious during the home interviews that these young parents derived considerable pleasure and satisfaction from their children and from their roles as parents and that these satisfactions seem to compensate for any costs to the marital relationship.

The childless therapy couples with the "too little time together" pattern spent less time with each other overall, with more of their time rated as unpleasant or negative and with markedly less rated as pleasant or positive. The positive/negative ratio for the childless couples was 4.4 to 1. On the other hand, the therapy couples with children reported more pleasant interaction and less unpleasant interaction, with a positive/negative ratio of 8.8 to 1. During the debriefing home interviews, it was observed that these couples were more pleasant and polite while the children were awake than they were after the children were in bed. Furthermore, even though several couples complained that their marriages suffered from a lack of communication, poor sexual relations, and financial problems, they still credited

partners with making an effort to interact well with the children. The therapy couples with children averaged 1200 more minutes together over the 14-day recording period with 1067 minutes of the additional time rated as positive.

The two therapy couples in the "too much time together" subgroup will be discussed individually in the case by case behavioral analysis which follows. In general, the pattern involving more positive time in the case of the couple with a child and more negative time in the case of the childless couple is repeated, but with an enlargement of all the cumulative totals. Their idiosyncratic patterns and background data will be described below.

Behavioral Analyses

The twenty case studies which follow contain descriptions of the idiosyncratic patterns of husband-wife interaction based on self- and spouse-monitoring of pleasant, neutral, and unpleasant behaviors, as well as daily and weekly interaction schedules and sequences. The pre- and posttest questionnaire data are interwoven with summations of the daily time records, activity logs, and excerpts from the participants' personal comments to give the reader as rich and detailed a picture of each couple as possible within the limits of brevity and anonymity. Pseudonyms have been assigned arbitrarily. Cases A through E are the five happy couples. Cases K through O are the five therapy couples without children. Cases P through T are the five therapy couples who are parents.

As stated in the Marital Satisfaction Time Line Instructions (see Appendix C), the quality-ratings of the time that the couple spent

together were color-coded: red = pleasant or positive; blue = neutral; black = unpleasant or negative. The husband and wife data were plotted in tandem rows, each set of which represented a 24-hour period. There were two graphs per couple with 7-days' data on each graph.

Additionally, the total number of minutes-together per day was plotted on 6-cycle semi-log graph paper for five categories of interaction; (1) negative minutes per day; (2) neutral minutes per day; (3) positive minutes per day; (4) total minutes together per day; and (5) total no contact minutes per day of the 18 hours awake time available daily.

Unfortunately, the time and expense involved in reproducing the 40 colored graphs and 20 semi-log graphs used for the behavioral analyses are prohibitive. Readers interested in obtaining copies of these graphs may contact the author.

Mr. and Mrs. A

Alex and Alice are a young childless couple living in married student housing who had been married 17 months at the time of the study. Alex is 21 years old and is studying architecture. Alice is 20 years old and works as a secretary. They spend approximately 32 percent of their waking time together, averaging about 3 hours and 30 minutes together per day on weekdays and 11 hours and 45 minutes together per day on the weekends. Their rating of marital happiness each day (on a scale from 1 to 9) averaged 6.1 for both of them, with Alex rating the weekends as 7.5 and Alice rating them as 7.0.

An overview of the two weeks of continuous recording shows that this couple apparently needs at least five waking hours together (including time for meals, personal hygiene, and household chores) in order to have time to "get into" their relationship. The weekdays included predominantly neutral time with only short intervals of either positive or negative interaction time. The weekends, beginning Friday evening and extending to Sunday midnight, were both predominantly positive only after communications were re-established. According to Alice, her discontent began Friday evening: "Today seemed to be a, blah day. The conversations between my husband and myself seem to go nowhere. There was no interest on both our parts." For Alex the short Friday evening which included grocery shopping was a source of discomfort: "I had a very bad headache tonight (which is unusual for me)." Saturday morning began with a continuation of the tension. Alice wanted more attention from Alex and blamed him for their lack of leisure time together. Alex was confused by her messages ("about us not playing

tennis much in the past") and wanted her to be less withdrawn and "express her inner feelings." A "spat" Saturday lasted from 12:45 P.M. to 2:15 P.M. at which time the problem was resolved to their mutual satisfaction. Alex took Alice shopping, carried all the packages, bought her a ring, and, in general ". . . was good company and funny." The second weekend Alex picked Alice up from work Friday and took her out to dinner, during which time they "talked constantly." The most positive behaviors for Alice were: "He listened really attentively about work and was happy with my choice of buying a gift for my parents." For Alex the best part of the day was the "pillow talk." Saturday, Alice volunteered to join him in his darkroom to learn how to print photographs.

Both Alex and Alice completed a questionnaire concerning their reactions to using the Marital Satisfaction Time Line. When asked if they would recommend a daily recording procedure to any of their married friends, they both said, "Yes." In rating the daily recording procedure on a scale from 1 to 7 (higher is better), Alex rated the procedure slightly beneficial (5), neither boring nor interesting (4 = neutral), and neither making nor solving marital problems (4 = neutral). Alice rated the procedure neither beneficial nor detrimental (4), rather interesting (6 out of 7), and neither making nor solving problems (4). In terms of overall marital satisfaction, this couple's ratio of positive time together to negative time is 11.4 to 1.

Mr. and Mrs. B

Burt and Brigid are a somewhat older childless couple who married when Burt was 30 and Brigid was 26 years old. Burt is finishing his graduate medical training in a subspeciality and routinely works 70 hours per week. Brigid has a bachelor's degree in fine arts and is preparing for motherhood. After three and a half years of marriage, they have recently purchased a new home which Brigid has decorated.

Currently Mr. and Mrs. B spend approximately 29 percent of their waking time together. Because of Burt's heavy work schedule at the hospital, they do not show the traditional pattern of spending more time together on the weekends. On the contrary, they averaged 5 hours and 15 minutes together per day on weekdays and only 5 hours together per day on the weekends. On the three "on call" days he had during the recording period, Burt averaged only 3 hours and 45 minutes with Brigid on each of those three days. On the remainder of the days when Burt was not "on call," they averaged 5 hours and 40 minutes together. Even though he was allowed to take "call" at home, Burt described himself as tense anticipating an emergency call from the hospital.

Their rating of overall marital happiness each day (On a scale from 1 to 9) averaged 7.36 for Burt and 6.5 for Brigid. The neutral time predominantly involved either watching television together or time in which Brigid quietly sewed while Burt studied for his medical board exam. Their one disagreement involved different opinions of a couple they had just met at a party. Both partners recorded this interval as "negative" time. Burt explained that he was overworked and overtired and that Brigid had a cold and was taking antihistamines which make her

"droopy." Burt called Brigid from work the next afternoon to "apologize for being sort of crabby lately."

This couple maintained good communications with minimal latency between the first contact each morning and evening and the initiation of pleasant interaction. They arranged their available time so that they ate both breakfast and dinner together each day. The most positive behaviors for Brigid were being asked her opinion about things, being asked how she was feeling, being asked what she would like them to do together in the afternoon, and discussing both Burt's career plans and their plans for a family. The most positive behaviors for Burt were having Brigid get up with him at 6 A.M. and make his breakfast every day, having Brigid ask him what he's thinking about and listening when he tells about his experiences at work, and talking about their plans for the future.

On the reaction sheet, Brigid said she would not recommend the procedure to others. Burt said that he would recommend a daily recording project to one of his married friends. In answer to the question, "For what purpose?", he replied, "To be more objective about daily activities." Both Burt and Brigid were neutral on the questions regarding beneficial/detrimental effects of the procedure and its making problems/solving problems. Both of them reported that participation in the marital research project was somewhat interesting (5 out of 7). In terms of overall marital satisfaction, this couple's ratio of positive time together to negative time was over 50 to 1 for the two week recording period.

Mr. and Mrs. C

Calvin and Cleo had been married for 2 years and 5 months at the time of the study. They were both 21 when they married and are now 23 years old. Cleo has a degree from a business college and works as a collection secretary. Calvin has a bachelor of science degree and is a dental student. They live in a small apartment in married student housing.

During the one hour pretest session and interview, they were relaxed and happy with each other. On both pretest and posttest, their marital adjustment scores and marital communication scores were high (each approximately 130 points). Their marital conventionalization scale scores were above the normal range for distressed couples but were not incompatible with their high adjustment and communication scores. They answered TRUE to the statement: "My mate and I understand each other completely," but answered FALSE to statements like: "If my mate has any faults, I am not aware of them." Their responses are considered reliable.

Mr. and Mrs. C spent 45 percent of their waking time together. Their daily reports indicate that they both work hard at their jobs during the day, play together in the evenings and on weekends, and required at least 9 hours of sleep each night. They enjoy having breakfast together on workdays and had dinner together each of the fourteen nights of the recording period.

The hour after work and before dinner, however, is sometimes less than pleasant. For example, on the first Friday of the recording period, Calvin explained the neutral time as follows: "She had a long, tiring day at work and my day was good so I waited until she recuperated from

the day at work." To describe the pleasant evening which followed, Calvin wrote: "Fixing dinner, sex, watching TV and kidding around -- I fell asleep before her" (10 P.M.).

The overall trend for the two weeks shows a distinctively weekly pattern that was repeated the second week. The cycle begins on Monday with the evening spent in parallel individual activities or on chores left from the weekend. This was rated as half neutral and half pleasant. Over the week the time together gradually decreases. The low point, Friday, is the most hectic and exhausting day with only one to three hours of interaction. They compensated for the decrease in quantity of time together by increasing the percent of pleasant interaction.

The total time together on Saturdays and Sundays averaged approximately 11.9 hours per day with 10.8 hours per day rated as pleasant. Following this intensive exchange over the weekend, the cycle begins again with parallel individual activities on Monday.

The marital happiness ratings made at the end of each day (on a scale from 1 to 9) averaged 8.07 for Calvin and 7.7 for Cleo. The overall ratio of positive time together to negative time is 27 to 1 for Calvin and 11 to 1 for Cleo.

For both Cleo and Calvin, the negative interactions were triggered by external foci rather than by their own behaviors. On one occasion Cleo reported that Calvin was "irritated at the car." On another occasion Calvin was impatient with Cleo, but she recognized the external source of his frustration: "Long day at work, takes a long time at night to recuperate, and have to come home and cook, when nothing's thawed out." Cleo reacted to Calvin's impatience by dealing with its source rather than by becoming angry or defensive. After dinner, they relaxed

together, made love, and Calvin went to bed early.

The major negative interval for both Mr. and Mrs. C concurred when Calvin did surgery on Cleo's gums for 3-1/2 hours. Calvin said, "I was doing Perio Surgery on her; I wouldn't like to do that to her all the time -- she was an excellent patient." Again, unpleasant interaction was triggered by stimuli external to the husband-wife relationship as such.

On the reaction sheet during the debriefing interview, Calvin suggested a change in the recording procedure to reflect the "cause" of the unpleasant interaction: "Reason for having a bad time usually reflects something caused by someone or thing other than spouse -- (recording forms) should reflect this." Cleo had a similar response: "It was fun but if there were periods of blue or black times for us, it usually wasn't a result of something the spouse had done, just circumstances."

Cleo said she would recommend the daily recording project to her married friends "to make them aware of their time together good, bad, or indifferent." Calvin would recommend the project "to help an aspiring psychologist." They both found the procedure somewhat interesting (5 out of 7). Calvin felt that the procedure had "no effect" on either the detrimental/beneficial continuum or on the made problems/solved problems continuum. Cleo felt that the procedure was somewhat beneficial and helped somewhat to solve problems (5 out of 7).

Calvin's final comment suggests a "halo effect" in marital satisfaction: "Forms should reflect that pleasant time together may be because (the partners) like being together and not that a certain act made this a pleasant time." The pleasant rating is apparently not

contingent on a behavior or on a particular situation. The spouse's presence is positive, both as a conditioned stimulus paired with previous enjoyed interactions and as a discriminative stimulus signalling increased opportunity for future pleasant exchanges.

Mr. and Mrs. D

Darren and Doris had been married 18 months and have no children. Darren is 24 years old and works as a tennis instructor. He needs 7 hours to complete his bachelor's degree. Doris was 18 years old when they married and is currently 20 years old. She has her high school degree and works as a secretary. They live in a trailer park near campus.

The D's appear to be in the transition period "after the honeymoon's over." Their marital adjustment scores were relatively high and appear to have been slightly inflated. Doris indicated that she was "perfectly happy" on the pretest Locke-Wallace, yet admitted that they have difficulties over money, her desire to have children, and demonstrations of affection. On pretest there was an 18-point discrepancy in their scores. On the posttest there was only a one-point discrepancy in their scores (husband = 117; wife = 116). Their communication score were in the lower end of the "happy" range (102-112 out of a maximum of 138 points). Their conventionalization (lie) scores were midrange (mean = 44.7) and consistent with the "rose" picture described by young, childless couples who had been married a relatively short time. Bienvenu's mean for the Marital Conventionalization Scale is 34 with a standard deviation of 30 points. Maximum score is 97.

During the first day of the recording period, two situations arose which made Doris feel insecure and in need of Darren's companionship and moral support. She described the situations as follows:

I am also anxious about a possible job transfer, which I'm waiting to hear about, and a dental appointment which I have tomorrow. . . I also

felt very much in the need of his strength and security today. . . I was told by the dentist that I would be in surgery for 1-1/2 hours. He (Darren) made no offer to come with me and that made me feel frightened at the thought of having to face this alone.

Darren had a board meeting to attend that evening which left Doris alone and upset. The following week was difficult for their relationship because of Doris's worrying, physical discomfort, and depression. Darren rated much of their time together as neutral or unpleasant because Doris was sick (four episodes), unhappy (three episodes), and worrying about her job and the cost of fixing her tooth. They "made love" four times that week, but the second time "he fell asleep." The following day (Sunday) they had a fight at bedtime and she complained about his attitude toward sex. He stayed up and watched TV. Monday was mutually pleasant, with good lovemaking, after they had dinner and spent the evening at his parents' house.

When Doris wanted Tuesday evening to be another evening together that ended in lovemaking (the fifth day that week), she was disappointed. Her explanation about the unpleasant time at 10:30 P.M. was candid.

I tried very hard today to have things "perfect" for us (we have been fighting lately) and something that disturbed me very, very much did not bother him. When I cried half the night -- he slept. I was very hurt.

Darren said that he was aware of the problem: "She (was) very disappointed with sex -- it was probably my fault." For the next two days they remained emotionally and physically distant. He complained about her "crying and negative attitude." She could have "talked over problems." She complained that he didn't apologize and didn't do the dirty dishes. Furthermore, "I was very upset and he acted as if everything was OK."

They had a more productive fight, made up, and made love the following morning (Friday).

During the days that were particularly turbulent, interaction averaged 2 hours to 3-1/2 hours per day, confined to mealtimes. Once pleasant interaction was restored, time together averaged 4-1/2 to 5 hours per weekday, and 8 to 10 hours per day on Friday, Saturday, and Sunday. After their argument Doris again began to note Darren's positive behaviors: "he fixed dinner" and "he didn't get mad when I bought two new dresses." Since Doris commented on a "very nice lovemaking session," full sexual and emotional satisfaction were apparently restored.

Unfortunately, on the last recording day, Doris again came home from work unhappy: "I was very upset about my job; he was not very comforting or understanding." Data were not available as to whether the pattern from the previous two weeks (closeness--expectation of comforting--disappointment and rejection--estrangement--angry--encounter--apology--closeness) was a repeating cycle.

The D's spent approximately 32.2 percent of their waking time together. In overall marital satisfaction, Darren's end-of-day ratings averaged 6.2 and Doris's ratings averaged 7.0. On happy days Doris consistently rated the day one or two points higher than Darren did. On unhappy days she rated the day one to two points lower. The ratings of ongoing marital interaction yielded a ratio of positive time to negative time of 3.97 to 1 for Darren and 8.1 to 1 for Doris. This was the lowest positive/negative ratio of the ten couples in the "happy" group. This was apparently a difficult adjustment period for this young couple. There was some concern on my part as to whether the daily recording procedure has exacerbated pre-existing problems or perhaps had

helped them to focus on their problems and deal with them sooner and/or more effectively. The reaction sheets indicated that both Darren and Doris said they would recommend the recording procedure to other married couples. Darren would recommend it to "sensitize material relationships" and Doris would recommend it "to see the results."

Darren saw the project as neither beneficial nor detrimental (4 = neutral), neither interesting nor boring (4 = neutral) and neither making problems nor solving problems (4 = neutral). Doris saw the project as somewhat beneficial (5 out of 7), moderately interesting (6 out of 7), but neither making problems nor solving problems (4 = neutral). Perhaps summarizing her grievances on the daily recording forms helped Doris to communicate these problems more clearly to Darren during their confrontation. It may have been beneficial to exchange the daily forms at the end of each day to increase feedback between spouses. However, the forms were not exchanged by the partners in this study so that comparisons and analyses of independent ratings of quantity and quality of time together could be done.

Mr. and Mrs. E

Ed and Edith are a young childless couple who live in a small one-bedroom apartment on campus. They have been married 18 months. Ed was 21 when they married and is now 23 years old. He is currently working on his master's thesis. Edith was 20 when they married and is now 21. She has her Associate of Art degree and is working toward her bachelor's degree.

Because of their similar class schedules and study arrangements, they are able to spend approximately 49.5 percent of their waking time together. Their day generally begins at 8 A.M. with breakfast together. They meet for lunch for 30 minutes or an hour. They have classes or study in the library in the afternoon. Frequently they take a nap in the late afternoon before dinner. They prepare and eat dinner together and then study separately or together for several hours. When they are tired of studying, around 11:30 P.M. or midnight, they wash dishes, clean the apartment or do the laundry and discuss their homework or make plans for the next day. The first week of recording they usually went to bed at midnight. During the second week the end of term deadlines were more pressing and they worked until 2 A.M. each night.

On the marital adjustment questionnaires, both Ed and Edith scored 111 out of 137 points on pretest. On posttest, Ed scored 111 again and Edith scored 115 points. Edith felt that instead of "occasionally disagreeing" on finances, recreation, and intimate relations, these areas had improved to "almost always agree." The only area which caused frequent disagreement was "ways of dealing with in-laws." After the post-test debriefing, Ed explained that one of his parents and one of Edith's

parents were both problem drinkers. The E's are uncomfortable when they visit or are visited by either set of parents.

On the Marital Conventionalization Scale, Edith scored above the normal range on both pretest and posttest. Items she did not endorse included "My marriage could be happier than it is," "My marriage is not a perfect success," and "If my mate has any faults, I am not aware of them." Ed scored in the midrange on the marital conventionalization scale (36 on pretest; 44 on posttest). The difference in their scores reflects a difference in the willingness to subscribe to absolute statements rather than a difference in marital adjustment or satisfaction. The difference in responding to the questionnaires was repeated on the Marital Communication Inventory (MCI).

On Bienvenu's MCI the response choices are "Usually," "Sometimes," "Seldom," and "Never." On pretest and posttest, Ed avoided the absolute negative column. As a result, there was a 34-point difference in their pretest MCI scores and a 38-point difference in the posttest scores. On all three questionnaires (marital adjustment, conventionalization, and communication) the scores were remarkably reliable from pretest to posttest. In all cases the scores were consistent with a very young, happily married couple living in a sheltered environment without children. The majority of their worries as reported on the daily recording forms involved his thesis and her term project. The differences in response patterns on the questionnaires do not seem to reflect any tangible differences in their enjoyment of their marital relationship.

On overall marital happiness rated at the end of each day, Ed averaged 7.6 and Edith averaged 7.7 on a scale from 1 to 9. These averages were in contrast to their ratings of their work each day

(Ed = 5.8 and Edith = 5.1). Of the time potentially available for interaction, almost 50 percent was spent together. Of the large amount of marital interaction, both Ed and Edith agreed that 87 to 89 percent of the time was pleasant. Only 7 to 8 percent was rated as neutral. The negative time for Edith included the time she and Ed stood in line for class registration. For Ed the negative time included one argument which started when he would not let Edith eat while she was preparing dinner.

Based on the cumulative totals of quality of time ratings, Ed's ratio of positive time to negative time was 18 to 1 (6750 positive minutes to 375 negative minutes). Edith's ratio was approximately 36 to 1 (6435 positive minutes to 180 negative minutes). On the basis of both quality and quantity of interaction, the E's are considered to be happily married.

On the reaction sheet, both Ed and Edith agreed that they would recommend the daily recording program to their married friends. Edith commented: "One has to pay attention on the details of the day and can therefore correct little things that aren't realized normally." She rated the self-recording project as slightly beneficial (5 out of 7), slightly interesting (5 out of 7), and slightly helpful in solving problems (5 out of 7), somewhat interesting (6 out of 7), and somewhat helpful in solving marital problems (6 out of 7). Finally, Ed commented on the process of self-observation: "Sometimes it is hard to pin-point what makes a moment pleasant. I did not have much problem with the unpleasant moments."

Mr. and Mrs. F

Mr. and Mrs. F are a young, happily married couple with a four month old daughter. They have been married 4 years 2 months and live in a small one-bedroom apartment on campus. Fred is a 27 year old student in building construction who worries constantly about finding a job when he graduates at the end of the term. Fran, who is 24 years old, has her B.A. in education and plans to work as a substitute teacher until Fred can find a job. Their daughter, little Fran, is teething.

Fred and Fran are currently in transition with many changes expected in the next few months. They have recently become parents and Fred will soon change from the role of student to the role of unemployed construction worker. With luck, he will shortly thereafter assume the role of bread-winner. Many of the F's reported conversations reflect concern about transitional problems.

Their pretest questionnaires showed them to be moderately happy in their marriage, with room for improvement. On the Locke-Wallace Marital Adjustment Test, Fred scored 106 and Fran scored 109 (Maximum = 137). Their Marital Conventionalization (lie) Scale scores were low and reflected candid responses. Their Marital Communication Inventory scores were relatively low for couples in the "happily married" group. On pretest Fred scored 88 and Fran scored 99 (maximum = 138). On posttest their communication scores increased to a level close to the average for the happy couples with children. Fred's score rose to 95 while Fran's score rose to 104 (group mean = 103.1).

On the reaction sheet, Fred was blunt: "I wouldn't do it again." He would not recommend the self-recording project project to any married

friends and found it boring (1.5 out of 7). Fred felt the project was neither beneficial nor detrimental (neutral = 4), neither solved marital problems nor made problems (neutral = 4), was just a chore. His final comment was: "Very hard to keep any accurate account unless you are truly interested."

Fran, on the other hand, found the project very interesting (7 out of 7). She said she would recommend it to married friends "to make them aware of the actual amount of time they spend together." Fran felt the recording procedure was somewhat beneficial (5 out of 7), although neither solving marital problems nor making them (neutral = 4).

Over the 14-day recording period, Fred and Fran spent approximately 40 percent of their waking time together. While the quantity of time together was the same for both weeks, there were major qualitative differences. During the first week of recording, Fred and Fran visited and were visited by several of their friends and relatives. This was apparently the time the relatives chose to "come see the baby." Unfortunately, it was also the time Fred was supposed to use to study for midterm exams. Over the week Fred and Fran managed to spend approximately 28.5 hours "along" together, including mealtimes with little Fran. Fred rated marital relationship as more satisfying (7.0 out of 9) apparently because she enjoyed the Saturday and Sunday they spent at her mother's house. Fred felt frustrated due to not having time to study and felt ignored in the general conversation ("I'm at her mother's and nobody knows it.")

During the second week, Fred and Fran had 38 hours alone together which Fred rated 7.14 and Fran rated 7.43 (again on a scale from 1 to 9). Fred had more time for homework and rated his "work" an average of 7.0

for the week.

The ratio of positive time to negative time for the 14-day period was 3.56 to 1 for Fred and 6.4 to 1 for Fran. When these ratios are broken down to compare the first week with the second week, the qualitative differences are striking. Fred's ratio of pleasant interaction time to unpleasant interaction time averaged 2 to 1 the first week in contrast with 6 to 1 the second week. Fran's ratio average 4.7 to 1 the first week and 9.6 to 1 the second week.

A different type of interaction is seen between these young parents than was seen between the young husbands and wives in the previous group. When asked "Of the things he did during the PLEASANT time, which behavior was the most POSITIVE for you?", Fran noted on seven occasions that Fred helped feed little Fran or played with her. This was obviously a source of satisfaction for both of them.

On the other hand, parenthood was also a source of friction and frustration at times. Twice Fran commented on Fred's not comforting little Fran: "Baby screaming while we were trying to eat dinner -- Fred didn't help clean-up dishes and didn't want to hold little Fran so she wouldn't cry." Perhaps it is significant that Fran's dissatisfaction did not carry over into their later time alone together when they watched TV, talked and had sexual relations. Fran explained on the recording forms: "Fred doesn't have time to help much with her (the baby) because he has homework." Fred commented on the same interaction from his point of view: "She was very nice considering how bad the baby was."

Mr. and Mrs. G

Gerry and Georgia, who have been married 3 years 8 months, live in a small rural community and commute into the "city" to work. Gerry is a 28 year old lab technologist. Georgia is 25 years old and has her B.S. in physical education. She works parttime supervising games on the P.E. field (12 hours per week). Georgia spends most of her time caring for their two daughters, ages 25 months and 7 months. She continues to breastfeed the 7-month-old.

The G's marital adjustment scores were about average for the couples in the "happily married parents" group. Although Gerry's adjustment score was lower than Georgia's on pretest, his score increased 8 points on posttest to a point slightly above Georgia's score. Overall, there is consistent agreement that both Gerry and Georgia rate their marriage mid-way in the "happily married" range. There was no evidence on the conventionalization (lie) scale that their scores were distorted by a social desirability response bias.

On the Marital Communication Inventory, Gerry and Georgia scored well above the average for the "happily married parents" group. The wives as a group had communication scores an average of 2.5 points (at pretest) to 5.4 points (at posttest) above the husbands' scores. Georgia's scores were above Gerry's 8.5 points at pretest and 14 points at posttest. However, this difference appears to be an artifact of the questionnaire used. Georgia answered 22 questions with the "never" response, while Gerry used the "never" response category only 4 times which consequently resulted in a loss of at least 18 points.

Over the 14-day recording period, the G's spent approximately 27 percent of their waking time together. This was lower than the other nine couples in the happily married group, with and without children. While the quantity of interaction time was remarkably low, the quality of that interaction was relatively high. Approximately 80 percent of their time together was rated as mutually satisfying. For the five couples in the happy-parents group, this was the second highest percent positive time. Only about 1 percent of the G's interaction was rated as unpleasant or negative. Regarding that negative time, Georgia remarked: "He threw his tootsie rolls at me." Gerry explained that that unpleasant interaction involved "her talking about what I won't do. I've been sick for a while now (12 days) and we're both tired."

For both the negative time and the neutral time the G's avoid placing blame on each other by describing the extenuating circumstances which influence their spouse's behavior. In response to the question "During the NEUTRAL time, what could she have done to make your time together more pleasant?," Gerry said "nothing -- she had to care for children," "nothing -- I was too sick," and "nothing -- She had a long day." Georgia's answer to the same question was similar: "nothing -- both kids had earaches, spouse sick too," "nothing -- he had to have all his attention on his lab work," "sick -- needed to be cared for -- he could have been well; Gerry still sick -- fever -- not able to do much and I was tired." Considering that at least three of the four family members were sick during ten of the fourteen recording days, the G's showed a remarkable amount of teamwork and cooperation. Since Gerry and Georgia had to take turns resting and taking care of their daughters

("Let me sleep late while he watched kids -- I felt better when I got up"), this may account for their relatively small amount of husband-wife interaction. Despite the "relay race" aspects of this two-week period, the overall positive time/negative time ratio was 2.5 to 1 for Gerry and 54 to 1 for Georgia which is well above the range for distressed couples, but not unusual for the happily married couples in this study.

On the reaction sheet, Gerry said he would not recommend a daily recording project to his married friends. He rated the project as neither being detrimental nor beneficial for their marital relationship (neutral = 4), and neither making problems nor solving marital problems (neutral = 4). He did find the project somewhat interesting (5 out of 7). Georgia, on the other hand, said she would recommend the daily recording project to "see how much time is actually spent 'together.'". She rated the procedure as slightly beneficial (5 out of 7) and as slightly helpful in solving marital problems (5 out of 7). She rated participation in the marital research project as rather interesting (6 out of 7). She commented that she "Found it interesting to see how often we were together but not really interacting."

Mr. and Mrs. H

Harold and Helen have been married 3-1/2 years and have an 18-month old daughter, Heidi. Harold, 26 has a B.S. in Agricultural Business and Economics. He opened a new business just as the recording period began and is concerned about financing the new home they have just moved into. Helen, who is also 26, has her B.S. and is a full-time wife and mother.

During both pretest and posttest, Heidi actively interrupted by climbing on the table and scribbling on the questionnaires. Under the circumstances it was difficult to develop much rapport with this couple. They were embarrassed by her misbehavior and had difficulty disciplining her while I was present. Harold made it evident that he had other things he would rather be doing. Despite this reluctance the data was completed daily and mailed back promptly.

The marital adjustment scores were discrepant on pretest with Harold scoring 127 out of 137 and Helen scoring 98 out of 137. However, if the scores were corrected with the social desirability (lie) scale scores, Harold's marital adjustment score would be lowered by 29 points. Their scores are consistent with couples at the lower end of the "happily married" range.

The pretest Marital Communication Inventory scores for Harold and Helen were 98 and 97, respectively. Maximum score on the MCI is 138 points. The average pretest score for the nondistressed couples with children was 100.2 points.

On the reaction sheet after posttesting was completed, the H's agreed that they would not recommend the daily recording project to any of their married friends. Harold's comment was: "Too much trouble."

Both Harold and Helen agreed that the self-monitoring procedure was neither detrimental nor beneficial for their marital relationship (4 = neutral). Harold found the project boring (1 out of 7) and Helen found it somewhat boring (2 out of 7). Helen felt that the marital research project neither made problems nor solved them (4 = neutral). For Harold the project made a few problems (3 out of 7).

On the posttest marital adjustment questionnaire, Harold's score decreased by 5 points. His social desirability response bias decreased by 14 points to a more candid, less inflated level. He admitted that they frequently disagree about friends and occasionally about recreation. Helen, on the other hand, increased 14 points in marital adjustment on posttest. It is doubtful that this improvement is much more than wishful thinking since her response bias score also rose by 33 points. It is significant that the 29-point discrepancy between husband and wife marital adjustment scores on pretest was decreased to a 10-point difference on posttest. Their evaluations are at least in closer agreement, if not greatly improved.

Over the two-week recording period, their amount of time spent with each other on weekdays steadily decreased. The negative time, in particular, decreased for both Harold and Helen. For Helen the neutral time was cut in half the second week compared with the first week. Overall, the absolute amount of pleasant time decreased slightly, although for Helen the relative amount increased from 64.5 percent to 78.8 percent of the time together from the first week to the second week.

The effect of the change in Harold's work schedule was felt almost immediately. On the four weekend days (Saturdays and Sundays) Harold

rated his marital happiness at 7.5 while Helen rated her marital happiness at 8.5 (on a scale from 1 to 9, very unhappy to very happy). On the ten weekdays (Monday through Friday) Harold's marital happiness ratings averaged 6.1 while Helen's averaged 6.7. During the first week, they averaged 4 hours 9 minutes together on each of the weekdays and 11 hours 45 minutes together on Saturday and again on Sunday. During the second week, they averaged only 2 hours 33 minutes together on weekdays but increased to 12 hours 45 minutes each day Saturday and Sunday.

Harold described the negative interaction as follows: "Neighbor's children here, I was tired," "Baby was bad," "very tired," and "I was very tired." Helen's comments described the same problems: "Baby gave us a hard time," "(Harold) caused an argument by accusing me of not taking his business calls," and "could have talked to me, showed affection."

The periods of positive interaction tended to be extended periods of time on the weekend when the H's went to a ballgame and/or socialized with friends. For Harold the most pleasant time involved being excused from household chores after dinner: "I was tired -- she let me relax." For Helen the most pleasant time involved her birthday: "visited with friends, came home and visited together."

Overall, the ratio of positive time to negative time was 13 to 1 for Harold and 22 to 1 for Helen, which is well above the distressed level. Despite the strain that has been placed on the husband-wife relationship by Harold's new job and Heidi's irritability while teething, the H's apparently have adapted quite well during the short period covered by this self- and spouse-monitoring procedure.

Mr. and Mrs. I

Isaac and Ilene are a happily married couple with a 18-month-old son, Isaac, Jr. They have been married 4 years 8 months and have recently bought their own home. Isaac, 25, is a designer who graduated from trade school, who works 40 hours a week, and who brings home design projects to finish approximately three evenings per week. Ilene is a 24-year old wife and mother with a high school education.

On the Locke-Wallace marital adjustment test, Isaac scored 115 points while Ilene scored 119 points, both scores slightly above average for the happy-parents group. On posttest Isaac's marital adjustment score was 114 even though his social desirability response bias score had decreased from average level (i.e., 20) to a more candid level (i.e., 14). Ilene, on the other hand, decreased from 119 to 108 points in marital adjustment with a drop in social desirability response bias from 23 to 12. The changes in marital adjustment on the Locke-Wallace were from "almost always agree" to "occasionally disagree" over six areas of husband-wife interaction (e.g., matters of recreation).

On the Marital Communication Inventory Isaac scored 92 points and Ilene scored 102 points. Isaac's score is low in relation to their overall level of marital adjustment. However, as described in the case study of Couple E, the respondent is penalized on the MCI if he/she avoids the "never" response category and Isaac omitted those responses on both pretest and posttest. Isaac admits, on the other hand, that sometimes he has difficulty expressing his feelings to Ilene and sometimes finds it easier to confide in a friend.

Over the two-week recording period, the overall rating of marital happiness (on a scale from 1 to 9, higher better) averaged 7.3 for Isaac

and 7.4 for Ilene. The overall average rating for the ten happy couples based on 280 recording days (14 days X 20 participants) was 7.13.

Approximately 42 percent of the I's waking time was spent together. Of this time spent with each other, Isaac rated 10 percent pleasant and 90 percent neutral, with none as unpleasant. Ilene rated 33 percent pleasant, 65 percent neutral, and about 2 percent unpleasant. For Ilene the unpleasant intervals included the following: one Sunday afternoon -- "He wouldn't consider anything I suggested to do for fun;" and one Tuesday dinnertime -- "Overlooked the work I did, and picked on the one thing I didn't do." For Ilene pleasant behaviors from Isaac included: "He complimented me about losing weight" and "He fixed lunch for us. He took time to go to the playground with the baby and me."

One distinctive interaction pattern illustrated by the I's is the frequency of midday phone calls made by Isaac at work to Ilene at home. Since the most positive behavior reported by Isaac each weekday afternoon was "she told me she loved me over the phone," these phone calls have a high probability of continuing.

On the reaction sheets Isaac said he would not recommend the daily recording project to married friends, but Ilene said she would recommend it -- "To maybe help them make their marriage work." They both rated the project as neither detrimental nor beneficial (4 = neutral) and as neither making marital problems nor solving them (4 = neutral). While Isaac found the research project neither boring nor interesting (4 = neutral), Ilene found it slightly interesting (5 out of 7).

During the posttest debriefing period, Isaac elaborated on his subjective reaction to the daily monitoring procedure. He had recorded "most pleasant" behaviors during the first week, then had stopped. He

said he felt it was "dumb to write down every kiss," although he did continue to record the times they had sexual relations.

Isaac described the overall pattern of their evenings together as "family interaction" since he takes care of their son while Ilene takes care of dinner and the dishes. As long as Isaac, Jr., was awake the time was neutral -- "nothing to get excited about." Both of them agreed that Ilene's records were probably more accurate in listing quantity of time together since she had more opportunity to think about the task while he was away at work.

Mr. and Mrs. J

Jeff and Jennifer are a young, happily married couple with a two-year-old daughter, Janie. Jeff, who was 22 when they married, is now 24 years old and works 40 hours a week as a registered technician in a local hospital. Jennifer was 19 years old when they married, is now 22, and is a full-time wife and mother. The J's have a small home which they are furnishing with used furniture they have refinished.

On the pretest Marital Adjustment Test Jeff scored 127 out of 137 which was considerably higher than Jennifer's score of 108. The main difference between the two scores was Jeff's choice of "always agree" while Jennifer qualified her responses by saying "almost always agree." On posttest, Jeff scored essentially the same (i.e., 124). Jennifer's score increased by 11 points to 119 out of 137. All 11 points came from a change in the response to the question regarding "degree of happiness, everything considered, of your marriage." On the 7-point scale ranging from "very unhappy" to "perfectly happy," Jennifer had picked the mid-point (4 = happy) on the pretest but changed to "perfectly happy" on posttest.

The Marital Conventionalization (lie) Scale indicated that both Jeff and Jennifer had somewhat inflated pretest scores, although still within normal limits for their age and length of marriage. On posttest Jennifer scored 74 out of 97 on this measure of social desirability response bias. On pretest this level of response bias would have disqualified the J's from the study, since the marital adjustment scores would be considered suspect. In view of the fact that only one heavily

weighted item was changed (that is, overall "degree of happiness") the rest of the responses can be accepted as valid. On both tests Jenifer admitted that they "occasionally" --"get on each other's nerves around the house" and that "when disagreements arise they generally result in wife giving in."

On the Marital Communication Inventory, Jeff scored 109 on pretest and 111 on posttest. Both scores are above average for the happy couples with children (mean = 100.2 on pretest and 103.6 on posttest). Jenifer scored 93 on pretest and 101 on posttest. Two communication problems were pinpointed by the inventory. First, Jenifer replied "seldom" to the question --"Do the two of you ever sit down just to talk things over?" This was consistent with her response to the question on the Locke-Wallace "Do you and your mate generally talk things over together?" to which she replied "Now and then." Second, both of them said they "sometimes" or "usually" find it hard to understand each other's feelings and attitudes.

On the daily rating of overall marital happiness (on a scale from 1 to 9), Jeff's ratings averaged 7.8 while Jenifer's averaged 7.7 over the two weeks. Jeff discriminated between his rating of marital happiness and the rating of satisfaction with work, which averaged 6.6 over the eight days he worked during the recording period.

The J's pattern of husband-wife contact was greatly affected by Jeff's work schedule at the hospital. He works the 11 P.M. to 7 A.M. shift three or four times a week and has a 7 P.M. to 7 A.M. shift on Friday. During the first week he worked all weekend but had Wednesday and Thursday off. The second week he had a swing shift on Friday, then had Saturday, Sunday, and Monday off. One problem this changing schedule

causes is a day-night reversal so that even if he is not working, he cannot sleep. Jenifer's complaint is "he falls asleep on sofa while I'm watching TV; gets up to watch TV after I go to bed at 10:00."

The most pleasant behaviors reported by Jeff were things Jenifer did -- "Brought me a glass of tea," "Fixed my breakfast," "sex," "watered the plants," and "Barbecue outside." The most pleasant behaviors reported by Jenifer were things Jeff said -- "he talked with me at dinner rather than watch TV" -- and things Jeff did -- "gave me a neck massage," "gave me some flowers," and "he restored furniture for me."

The effect of a two-year-old child on the husband-wife relationship was evident from several of Jenifer's comments. For example, regarding a pleasant time: "dinner, daughter was on good behavior;" regarding an unpleasant time: "he didn't help me out with daughter when I was on the phone, she was cutting up and crying."

In the ratio of positive to negative time, Jeff rated the quality of interaction at over 50 to 1, positive to negative. Jenifer rated the time together 32 to 1, positive to negative, for the two weeks. They spent approximately 40 percent of their waking time together, with over 90 percent of that time rated as pleasant or positive. Even though rating the time as pleasant rather than neutral is consistent with a tendency for reporting socially desirable responses or of having "rose-colored glasses," it is still a perspective they both share equally.

On the reaction sheet, Jeff and Jenifer agreed that they would not recommend the daily recording project to their married friends. It is interesting to note that all five husbands in the happy-childless group said they would recommend the marriage project, while all five husbands

in the happy-parent group said they would not recommend the project.

Both Jeff and Jenifer agreed that the recording procedure was neither detrimental nor beneficial (4 = neutral) and that it neither made marital problems nor solved them. They both rated the procedure as rather boring (2 out of 7). Jeff's comment about the study during debriefing was that he wished that they had been paid for their participation. He has often worked as a "paid volunteer" for drug studies at the University Medical Center.

f

Mr. and Mrs. K

Keith and Karla are the first couple in the therapy couples group. Keith is a 26-year-old student at a community college. He was first married when he was 19 but had since divorced: "My first wife found another man while I was in Viet Nam." He and Karla have been married 2 years and 5 months.

Karla is a 25-year-old part-time community college student. She was first married for one year when she was 18, but was divorced because they were "too young." She remarried when she was 20 but was divorced again after 2 years because "he was an alcoholic." She married Keith when she was 23 and is now 3 months pregnant with the K's first child.

The K's contacted the regional mental health center for help with Karla's depression. Although Karla was identified as having the "problem" and initially Keith denied needing marital therapy, relationship counseling was recommended at intake evaluation and the K's agreed to participate.

Karla had recently been hospitalized briefly for physical symptoms secondary to her distress over her pregnancy, Keith's drinking, their financial insecurity, and her unmet emotional needs. Keith complained that she wanted to spend "too much time together."

The K's lived in a small trailer in a rural area outside the city. Because they have no transportation of their own, Keith was forced to hitchhike to and from classes. When Karla did not join him to go to her own classes, she was isolated in the trailer until his return.

During the two-week recording period, the K's spent approximately 58 percent of their waking time together. During approximately half of

this period, they had house guests who were Keith's Army buddies from Viet Nam. For Keith 80 percent of his time with Karla was pleasant. For Karla much of the time with Keith was pre-occupied by his friends. Only 61 percent of the time together was pleasant for her: "too many people here."

Behavioral analysis showed that their first week was particularly turbulent. The ratio of positive time to negative time was approximately 4 to 1 for Keith and 3.8 to 1 for Karla. This ratio increased substantially the second week to 50 to 1 for Keith and 19 to 1 for Karla. As a frame of reference, the positive/negative ratio for the ten happy couples was approximately 15 to 1 over the two weeks. The daily ratings of overall marital happiness (on a scale from 1 to 9) averaged 5.8 for both Keith and Karla the first week, but rose to an average of 7.6 the second week.

Content analysis showed that Keith came home drunk Monday night after being out with his friends. Tuesday evening he stayed home with Karla but took a "nap" after dinner for 3-1/2 hours. Wednesday Karla was depressed ("It was me, not him.") Thursday, Keith was drinking again and Karla picked a fight with him. Keith said she was "not very understanding." Friday, Keith took Karla to the hospital for prenatal tests. Saturday, Keith reported an "inability to communicate" during five hours of negative interaction that evening. According to Karla, the problem was made worse by the "people here all over the place." On Sunday they argued again for an hour and a half at lunchtime and apparently came to a temporary agreement. The rest of the day was very pleasant.

Monday night Karla became upset when Keith had a beer with his friends while watching the Pro Bowl on TV. This time the arguing only lasted 30 minutes before they "made up." When Keith went drinking with

his friends Wednesday night, Karla stayed home and went to bed. Keith felt the evening would have been more pleasant for him if she had "gone with me when I went out." The next day Karla was angry again when Keith got up at noon. On Friday the friends left and Keith did not drink the rest of the weekend. Having been married to an alcoholic in her second marriage, Karla is particularly sensitive to any level of alcohol consumption, controlled or otherwise.

During the debriefing session with the K's and their therapist after the posttest, the relationship between Keith's drinking and Karla's nagging was pointed out. It was suggested that they negotiate an exchange in which Keith could have a limited number of beers each week and Karla could have more time alone with him. Karla's nagging punished his being in her presence not his drinking several hours before.

On the pretest Marital Adjustment Scale, Keith scored somewhat higher than Karla (104 vs. 91) which is consistent with his initial claim that they did not need marital therapy. However, the Marital Conventionalization Scale scores indicated that both their scores were inflated by social desirability response bias. Their scores, 29 and 31, were slightly below the mean score obtained by Edmonds when he developed the MCS ($M = 34$; $SD = 30$).

On posttest Keith's MAS score increased by 2 points while his MCS score increased by 18 points to 47. On two of the items he added qualifiers to change the absolute statements to relative ones. Karla's Marital Adjustment score decreased by only 3 points, even though her social desirability response score dropped from 31 to 0, from inflated to candid. On posttest she admitted that they "frequently disagree" on matters of recreation.

Their communication scores were about average for the childless-therapy couples group, but considerably below the average for the ten happy couples in the study. Both their scores increased slightly over the two weeks.

On the reaction sheet, Keith said he would recommend the daily recording project to married friends "if they seriously wanted to know what they did with their time." His comment on the recording procedure was: "Sometimes it's hard to distinguish between positive and neutral." Karla made no comment as to why she would not recommend the daily recording procedure.

They both found the marital research project neither boring nor interesting (4 = neutral), neither making marital problems nor solving them (4 = neutral). Keith found the project neither detrimental nor beneficial (4 = neutral), although Karla felt the project was slightly beneficial (5 out of 7).

Since they have been promised feedback with their therapist in return for their participation, Keith's final comment relates to the post-study feedback session: "I really appreciate what you're trying to do."

Mr. and Mrs. L

Leo is a 21-year old college junior who is studying to be an orthodontist. In addition to being a full-time student, he works 16 hours a week as a stock clerk in a large department store and volunteers two afternoons a week at an orthodontics lab. Lauren is a 20-year old clerk at a bank and works 40-45 hours a week. She has her high school degree. When they married, Leo and Lauren were 19 and 18, respectively. They have been married 17 months.

On the pretest Marital Adjustment Scale, Leo scored 100 points but dropped to 90 points on posttest. Lauren scored 92 on pretest and, on posttest, also dropped 10 points. The major problems reported were: frequent disagreement regarding sexual relations and demonstration of affection, as well as constant bickering. Concurrent with the drop in marital adjustment, there was a 10-point decrease in their Marital Conventionalization scores so that on posttest they both scored zero, that is, showed no evidence of social desirability response bias.

The Marital Communication Inventory scores also decreased from pretest to posttest. Leo's score decreased from 101 to 84 while Lauren's score decreased from 91 to 75 points. The maximum score on the MCI is 138 points. The mean score for the therapy-couples group was 73.7 on both pretest and posttest, so that they were considerably above the mean at pretest.

Behavioral analysis of the daily recording forms showed that Leo and Lauren markedly decreased their time together over the two week period. For Leo the negative time increased, while the positive time dropped out

completely on Day 8. For Lauren the negative time ended on Day 5 as did the positive time. She rated the interaction on Days 6 through 13 as neutral only. On the 14th day she had one hour of positive interaction with Leo.

Content analysis of the recording forms showed that there was very little one-to-one interaction. While Leo stayed home to study, Lauren drove to a neighboring city with girlfriends for an all-day shopping trip. The time in the evening that could have been utilized for intimate communication was spent watching TV together. The pattern was repeated on Sunday, as Leo described it: "I watched Super-Bowl and studied; she stayed with a friend all day."

On Monday a series of disruptive events began for Lauren and she became "moody": "She was having stomach pains, bad day at work, problems with car, bill for glasses, etc.." Lauren was left with the task of returning the car to the Toyota dealer again for repair. Meanwhile, Leo had a very good day studying. By the end of the week, Lauren had to take the car in for repairs once more and began having headaches. Lauren described her general reaction to stress: "Another rotten day. I find if things go wrong early in the A.M. it has a tendency to spoil the entire day."

Leo tried to cheer her up by increasing positive behaviors: "He told me he appreciated my working so he can go to school." He took her out to dinner Thursday night.

On Friday, Leo made the social error that was found several times among the therapy-group husbands: "(He could have) made introductions-- he had a friend over and completely neglected to acknowledge me." This

appears to have been a "last straw" for Lauren, although Leo was not aware of it at the time. It is hypothesized that Lauren was depressed in part because of the lack of reward~~y~~ for her in their uneven division of labor in the marriage: "I did chores--he studied and watched TV." To add insult to injury, Leo's comment showed that he met her lack of rewards with more demands: "not happy--no sex."

On the posttest reaction sheet, Leo said he would recommend the daily recording procedure for the purpose of "seeing how well they communicate, time together, etc." Lauren said she would not recommend the project but gave no explanation.

Leo felt that the marital research project was very beneficial for them (7 out of 7) because "it brought problems out in open, made me realize there is a definite, bad problem and help is needed." Lauren felt that the project was rather detrimental because "It made me realize how little I enjoy the time I spend with Leo." When Lauren realized how little she and Leo actually interacted in a typical week, she told Leo she wanted to separate and get a divorce. Leo was ordinarily either working or studying. After work Lauren gradually spent her leisure time taking care of the small apartment, going out with her girlfriends, or reading novels. She read an average of 8-10 romantic novels each week.

For Leo the research project was neither boring nor interesting (4 = natural), but for Lauren it was slightly boring (3 out of 7). Leo felt that the research project neither made marital problems, nor solved them (4 = neutral); Lauren, on the other hand, felt that it had made a few problems (3 out of 7).

At the debriefing after the testing was completed, I asked the L's about their role models for communication. Leo's parents had been divorced once and Lauren's mother had been divorced three times, Lauren admitted that separation and divorce were the only ways that she knew of handling marital conflicts.

Leo had originally volunteered to participate in the "happy couples" group. It was not until after the posttest session that he admitted that he had been trying to get Lauren to go to marriage counseling with him for over six months. Since their scores were not high enough to qualify them for the happy couples group, they already had been eliminated from the study as a "midrange" couple. Furthermore, their initial home interview had disclosed considerable underlying marital tension which corroborated their exclusion from the happy group.

They contacted me after the posttest to inquire if they could see me for marital therapy. Appropriate arrangements were made for a referral to the student counseling service. Feedback on the marital research data was given to the L's and their therapist during intake evaluation. Thereafter, they were considered eligible for the therapy-couples group.

I met Leo again for a one-month follow-up. He said that Lauren gave him very little hope for a reconciliation, even though she had liked the therapist to whom I had taken them. She showed concern for Leo (did his laundry, asked how his classes were going), but did not "love" him as she felt she should. She had finally conceded that she did not know what "love" was, but she was certain that it was necessary for a marriage.

Mr. and Mrs. M

The M's have been married for 2 years and 2 months. Mike is a 26-year old carpenter working 40 hours a week, who completed 2-1/2 years of college. Maureen is a 22-year old housewife who has her Associate of Arts degree and is taking 9 hours of noncredit courses at the community college. She babysits on weekdays for two neighbor boys from 5 A.M. until 5 P.M. in order to supplement the family income. Mike and Maureen live in a small house in a nearby township. Maureen's 18-year old brother, Matthew, lives with them and helps with living expenses. Among the three of them, the M's have several dogs and cats.

On pretest the Marital Adjustment Scale, their scores were slightly below average for the childless therapy couples group. On both pretest and posttest, Mike scored 8 points lower than Maureen. In response to the question: "If you had your life to live over again would you. . . ." Mike replied "Not marry at all." To the same question, Maureen replied "Marry the same person" with the added note "Wait a few years." They both agreed that they have serious difficulties because of different amusement interests, a lack of mutual friends, and a lack of mutual affection. They frequently to almost always disagree on "the amount of time that should be spent together." Although they both feel sexual relations are "enjoyable" with each other, there is still "frequent disagreement" about sex.

The Marital Conventionalization Scale scores were both zero on pretest and on posttest. There was no evidence of social desirability response bias.

On the Marital Communication Inventory, they had the second lowest scores in the study and the lowest scores in the childless therapy couples group. Mike scored 61 on pretest and 52 on posttest. Maureen scored 58 on pretest and 56 on posttest. Maximum score possible is 138 points. The average for their group was 82.1 on pretest and 76.7 on posttest.

During the debriefing session, I inquired if having Maureen's brother, Matthew, living with them made it more difficult for them to communicate. They said that, on the contrary, he was their only means of communication since he acted as go-between and "translator." The pretest questionnaires had apparently made them more aware of this deficiency in their relationship.

Over the two-week period, the M's spent approximately 26% of their waking time together, with 50% of that time positive for Maureen but only 34% of the time positive for Mike. Their daily ratings for overall marital happiness, on a scale from 1 to 9, were the lowest among the twenty couples in the study. The mean daily rating for the couples in the childless therapy couples group was 5.8 out of 9. Mike's ratings averaged 4.4 while Maureen's averaged 4.6.

Analysis of the behavioral data revealed that the quality of the day was primarily influenced by the initial interaction each day, usually between 6 and 8 A.M. On Day 1 of recording, Maureen woke up with a headache. The time together was negative because Mike "reacted to my bitchiness with same." For Mike it would have been more positive if Maureen had "helped me fix lunch for work." He worked from 8 A.M. until 10:30 P.M. doing carpentry work. When he arrived home, Maureen was aware that he was "very tired," but she was not successful in making their time

with each other pleasant. For Mike the late evening would have been positive if she had "not discussed bills and our problems as much."

On Day 3 of recording, a series of arguments about the use of the car began. Maureen complained that Mike could have "been more willing to share the car" between 7 A.M. and 8:15 A.M. Later, between 6:30 P.M. and 7:15 P.M., they had an argument which demonstrated their faulty communication patterns. From Maureen's point of view, Mike "didn't want me to keep the car to go to class." Mike, on the other hand, said that she "complained about having to pick me up after class. I thought she was being selfish." Day 4 began with a continuation of the dispute. Mike's "not wanting to take me to work or have to wait on me" was unpleasant for Maureen. Later they were able to wait on me" was unpleasant for Maureen. Later they were able to cooperate on a household chore generally assigned to Maureen ("Helped Maureen finish one of her cleaning jobs. Enjoyed working together.")

On Day 5 the pleasant time for Mike was characterized by the omission of negatives ("No disagreements") rather than by the presence of positive behaviors as reported by Maureen ("talked about his day; told me that his boss said I did very good work.")

On Saturday, Day 6, Mike and Maureen had very different perspectives on the evening they spent together. For Maureen "Saturday night was nice 'cause it was the first time we've been out in months, even if everyone was tired." She pressured Mike into participating more in the group interaction and he apparently complied: "(he) was a little more sociable toward people we went out with (talked a little)." Her rating of the evening was positive.

Mike's rating of the same evening was negative. At dinner he became silent and withdrawn to punish Maureen for changing the plans for the evening without first consulting him: "I wanted us to go to the concert alone, but Maureen invited someone without my knowing about it." Later, Maureen "Embarrassed me in front of friends because I was being quiet. I wanted to listen and enjoy the concert." He complied with her request that he join in the conversation, but for him the evening was unpleasant from 7 P.M. until midnight.

For Maureen the positive interactions generally involved working side-by-side on household tasks ("mopped the floor and helped clean") and the acknowledgement of positives given ("told me he liked the haircut I gave him alright.")

For Mike the positive interactions were dependent on Maureen's mood ("she was cheerful") and on her willingness to give him attention and affection ("Very loving, listened to what I had to say.") When things were pleasant with Maureen, he did not attribute her behavior to their relationship or to her concern for him: "she was more considerate. May have been because she was around her frields all day." When things were unpleasant he did attribute her behavior to her lack of concern for him: "Inconsiderate, did not do any household jobs--always seem to be left for me. . . . It's very upsetting to work all day, then have to clean the house when I get home. We have discussed this often but it has not improved the situation." He was very unhappy and rater their relationship at a 2 (on a scale from 1 to 9) for that day.

Overall, the ratio of positive time to negative time was 1.6 to 1 for Mike. However, over the two weeks, the marital interaction became more pleasurable for him. His quality of time ratio was 0.7 positive to 1 negative during the first week, but improved to 6.7 positive to 1

negative during the second week. This is consistent with his low daily ratings of overall marital happiness (1 to 9) which averaged 4.28 the first week, but rose to 4.86 the second.

Overall, Maureen's ration of positive time to negative time was 9 to 1 for the two weeks. The ratio was 5.3 to 1 the first week but jumped to 50+ to 1 the second week. Over the second week the time spent together decreased each day until Saturday when they saw each other only at breakfast: "I worked today and my wife went to the beach with friends. Saw each other very little. I was asleep at 9:30 when she got home." Perhaps "absence makes the heart grow fonder." In any case, the next day (Sunday) was the best day during the two weeks because they shared 8 hours 45 minutes of mutually positive time together, beginning with sexual relations when they woke up.

On the reaction sheets, both Mike and Maureen said they would recommend the daily recording project to married friends. Mike suggested it "might help to uncover some problems." Maureen recommended it "to bring attention to time spent together (quality)." For both of them the recording project was neither boring nor interesting (4 = neutral) and neither made marital problems nor solved them (4 = neutral). For Maureen the recording procedure was neither detrimental nor beneficial (4 = neutral). For Mike it was slightly beneficial (5 out of 7). Maureen's final comment suggests the perplexing nature of their relationship to them. Since there was so little interaction that was totally positive, it was sometimes hard to distinguish positive from neutral. Furthermore, the method of handling totally unpleasant interactions apparently was to avoid each other's company. Previous attempts at improving their

relationship had been unsuccessful so that they eventually sought professional help. Since Maureen has difficulty discriminating among the qualities of time together, she also finds it difficult or impossible to predict what would change the negative time to neutral or the neutral time to positive: "I had a hard time judging between neutral and other times. Also I didn't know what actually would make things any better."

Mr. and Mrs. N

Nick and Nora have been married 2 years and have no children. Nick is a 25-year-old law student who will graduate in 3 months. In addition to his coursework, he works parttime. Nora is a 26-year-old librarian who has her Master of Science degree and who works 40-50 hours per week.

Nick and Nora had the lowets Marital Adjustment¹ Scale scores in the study. From a pretest score of 72, Nick's adjustment score dropped to 68 at posttest. His social desirability response bias score dropped by 6 points from pretest to posttest. From a pretest score of 60, Nora's adjustment score rose to 66 at posttest. She showed no evidence of response bias on either the pretest or the posttest questionnaire. Serious problems for the N's included: sexual relations, ways of dealing with in-laws, constant bickering, and finances.

On the Marital Communication Inventory, Nick and Nora scored 77 and 67, respectively, which was considerably below the average for the childless therapy couples group (Mean = 82.1). While Nick's score was approximately the same on posttest, Nora's communication score dropped by 16 points. She reported that it is "usually" easier to confide in a friend rather than in Nick. Also he "usually" sulks or pouts or insults her when he is angry. Nick said that Nora was "seldom" affectionate toward him, "seldom" tried to life his spirits when he was depressed or discouraged, and "seldom" offered him cooperation and emotional support.

Analysis of the data recorded daily indicated that the N's spent 29 percent of the waking time together, of which roughly 59 percent was positive. While these percentages are about average for the therapy couples as a group, the remarkable difference is in the larger amount of negative interaction. Nick reported that over 8 percent of the time was

negative, but for Nora almost 14 percent was negative. Over the two week period, the positive interaction decreased, while negative interaction increased ten-fold. Interestingly, instead of decreasing, their overall total amount of time together increased by almost a third during the second week. They spent approximately 25.5 percent of their waking time together the first week and 32 percent together the second week.

Content analysis of the daily reports indicated a marked change in the quality of their interactions on Day 7 (Tuesday). They were separated on Day 1 of the recording period because Nora went out of town to a convention. They were mutually warm and affectionate on Day 2 when she returned. On Friday night they went to dinner together at friends' home, had a good time, and stayed out late.

Saturday morning (Day 4), Nick slept late ("Didn't crab at me for sleeping late.") When she returned from shopping, he helped put the groceries away. At 2 P.M. she initiated sex. Nora summarized her feelings about their marriage at that point: "I feel our relationship has improved 100% in the last month or so. We are both giving and sharing more."

The problems began at 3 P.M. after they had had intercourse. Nick ignored Nora the rest of the afternoon until after dinner at 6:45 P.M. The time was pleasant for him, but neutral for her and her expectations were unmet ("he could have paid more attention to me instead of reading, then playing his guitar.")

On Sunday (Day 5) he agreed to visit her mother ("wanted me to go see my mother, if that's what I wanted; was agreeable to this -- it's something we have disagreed about.") He worked at the library all afternoon and evening so that their only contact was to phone calls, one initiated

by each of them. Nora felt "under the weather" and attributed it to a "cold or the flu."

On Monday they spent the evening together watching TV and holding hands. It was positive for Nora because Nick had "stayed home with me instead of refereeing at a basketball game." Tuesday (Day 7) was their wedding anniversary and Nora started her period. At 8:15 A.M. Nora called Nick to tell him "the muffler on the car was broken." He made a trip home and was angry and sarcastic. The car was taken to a garage and he picked it up at 3 P.M. That evening they went out to dinner and to a movie. Nora was upset about "his tone of voice and yell when he thought I was 'backseat driving,'" when they were driving home after the movie.

On Wednesday (Day 8) they were separated until suppertime. From 7 P.M. to 8 P.M. was positive for Nick ("She washed dishes and didn't complain about me not helping even when I asked") but was neutral for Nora ("chores"). At 9:30 P.M. they had an argument about money. The argument was not resolved that night and was continued twice the following evening ("he bought something behind my back for \$50 and I only found out when I overheard him talking on the phone.") Nick was not aware of Nora's anger except that she wouldn't play cards with him when he asked.

On Friday (Day 10) they were scheduled to visit Nora's mother over the weekend. Nora was angry at Nick because he was "reading the paper when I came home from work, instead of packing and getting ready to go." When they stopped at a restaurant for dinner, they had another quarrel, according to Nick, because Nora "bitched about me eating during her diet." The argument was left unresolved.

Saturday, Day 11, began with an argument about the dog. From 8:30 A.M. until noon was negative for Nora because Nick began the day by "telling me

that I was lying which wasn't true (concerning an incident with the dog)." Later Nick told her he did not like visiting her family. It was not their behavior that bothered him, however; it was Nora's behavior when she was with them since she ignored him most of the time. He described how the neutral time could have been improved" "(if she had) not acted like I was bothering her when I talked to her.")

On Sunday (Day 12) she cooked him breakfast and brought it to him in bed. He wrote it on his recording form as a positive behavior of hers, but he neglected to thank her for doing it. When they returned home from visiting the relatives, Nick worked from 6 P.M. until 1 A.M.

On Monday Nick tried to get Nora to pay attention to him by "acting silly and pinching and tickling me." He apparently wanted them to have sexual relations, but failed to interest her in the idea.

On Tuesday they watched TV after dinner. Nick became angry: "she acts tired about sex, won't talk about it." Nora was very upset: "threatened me with leaving me if we didn't have sex." One hour later I arrived for the posttest, which probably adversely affected the posttest scores.

Their positive/negative ratio during the first week was 50+ to 1 for Nick and 22 to 1 for Nora. The second week the positive/negative ratio dropped to an alarming 2.2 to 1 for Nick and 2.16 to 1 for Nora which is within the range for couples "at risk" for divorce.

Because their therapist was concerned that they not miss a therapy session during the research project, they had the regularly scheduled therapy session Wednesday evening (Day 8). During the therapy session, they rated the time as neutral (they could have "talked about something important.") After the posttest, the N's were given feedback on the

marital research data with their therapist.

On the reaction sheet Nick said that he would recommend the daily recording project to married friends because it "makes you really think about what you do together." Nora said she would not recommend the recording project to married friends. Nick felt that the recording procedure was slightly beneficial (5 out of 7), although he felt the research project neither solved marital problems, nor made them (4 = neutral). Nick found the research project rather interesting (6 out of 7).

Nora felt that the recording procedure was neither beneficial, nor detrimental (4 = neutral) and neither made marital problems, nor solved them (4 = neutral). She found the research project neither boring nor interesting (4 = neutral). During the debriefing session, Nora explained that her reaction to the marital research project might have been more positive if Nick had not used the recording forms to hurt her feelings. He reportedly made a show of getting out the black pen after a fight and taunted her with a "bad rating."

Mr. and Mrs. O

Oscar is a 27-year-old pharmacist who works 44 hours per week. He has a Bachelor of Science in Pharmacy. Oscar was married previously and has a 7-year-old child who lives with his ex-wife. Opal is a 23-year-old graduate student working on her master's thesis. The O's have been married 18 months and have no children.

Their Marital Adjustment Scale scores were above average for the childless therapy couples group (Mean = 85.9). There was a discrepancy between Oscar's pretest score (i.e., 95) and Opal's score (i.e., 79), but this could be accounted for in part by Oscar's higher social desirability response bias score. The response bias score on the Marital Conventionalization Scale was twelve for Oscar but zero for Opal.

On posttest his adjustment score was slightly lower (i.e., 93), while his response bias score dropped to zero. Opal's posttest adjustment score rose by 19 points to 98 which may have been slightly inflated. She had a minimal social desirability response bias score of 6 points out of a maximum possible of 97.

On the Marital Communication Inventory, their scores were well-above average for the therapy couples group (Mean = 73.7). Oscar's pretest score of 94 rose to 99 on posttest. Opal's pretest score of 102 dropped slightly to 100 on posttest.

The major problems cited on the questionnaires included: mate's attempt to control spending of money, constant bickering, mutual selfishness and lack of cooperation, and different amustment interests.

Their daily ratings of marital happiness were above average for both the childless therapy couples group (Mean = 5.8) and for the childless

happy couples group (Mean = 7.14). Oscar's daily ratings of marital happiness (on a scale from 1 to 9) averaged 7.7 while Opal's ratings averaged 7.6 over the 14-day period. For Oscar the marital happiness ratings were much higher than were his daily ratings of satisfaction from work (Mean = 4.2). This work-satisfaction rating was the lowest among the 40 participants in the study.

Analysis of the daily recording forms showed a strong trend toward increasing positive interaction time over the two weeks, with only two isolated negative episodes. The neutral time-together decreased from 35 percent the first week to 19 percent the second week. Overall, they spent 26 percent of their waking time together with approximately 68 percent of that time rated as positive.

Content analysis of the daily records seemed to indicate a basically warm, loving relationship which periodically suffered from external stresses which were difficult to take in stride. They "made love" twice on Day 1 prior to Oscar's trip out of town to watch a golf tournament. In the morning Opal commented that they "made love -- made me feel really in love with him." The neutral time was not Oscar's fault: "my own bad mood for hitting my elbow in shower and feeling pregnant and fat."

When Oscar returned the next day from the golf tournament, Opal was in tears, worried that she was pregnant. She rated the time as neutral: "Oscar did everything he could to comfort me; that's why it wasn't unpleasant even though I couldn't stop crying."

Thursday, Day 3) was exceptionally good for Opal which, in turn, made it pleasant for Oscar: "Work was great today -- got complimented by everyone on a story I wrote -- positive day in school too. Oscar left

a nice note for me when he left for work -- liked that!"

On Friday Opal told Oscar that the pregnancy test was positive. He comforted her and calmed her down, but he became upset later that afternoon. According to Opal, the unpleasant situation would have been more pleasant if Oscar had "not yelled at me while I was trying to make abortion arrangements."

On Saturday, Oscar's golf game ruined the afternoon for both of them. He said: "I felt bad about myself because I was disappointed in the way I played golf and was very tired all day." Opal rated the afternoon as negative and attributed it to Oscar's behavior: "very rude to one of my friends -- fought about it from 5-6 P.M. as he is never nice to my family or friends -- also ignored me when he came home. . . . One of Oscar's friends came over and they both acted obnoxious, which he typically does in front of my friends. This especially pisses me off as I am always going out of my way to do things nice for his friends."

By Tuesday (Day 8) Oscar was tired of Opal's complaints about morning sickness: "even though she feels bad, she could complain and bitch less."

Most of their positive ratings were the lack of an expected negative, for example, "(Oscar) took me out to dinner without complaining about money." For Oscar the evenings were pleasant because "Opal doesn't seem to be worrying as much."

On Day 19, Thursday, external circumstances made a major discrepancy between the two ways Oscar and Opal felt about themselves. Oscar had a "very bad day at work," while Opal was very happy about having a story she wrote published: "Oscar said he was proud of me, but he didn't even read it which hurt my feelings." Oscar worked all day Friday: "had another

typical horrible Friday at work." Saturday was more of the same: "work was bad today, ruined my day." During debriefing after the posttesting was completed, Oscar explained that Friday, "payday," is always very busy with prescriptions. People are in a hurry to do their grocery shopping, always complain if they have to wait, and never say "thank you" to the pharmacist for the work he does for them. Because of a rotating weekend schedule, Oscar had to work from Monday (Day 7) through to Monday (Day 14) without a day off. This work schedule affected the total amount of time they could spend together, since he had three days off the first week but none the second. On the whole, they had less time to be with each other the second week, but were able to have more pleasant interaction, despite Oscar's stressful job.

The positive/negative ratio for the time spent together was approximately 30 to 1, positive to negative, for Oscar, but 13 to 1, positive to negative, for Opal. These ratios are above average for the therapy couples in this study and are consistent with the O's higher marital adjustment scores.

On the reaction sheet, Oscar commented that the daily recording forms are "fairly easy and straightforward once you understand how to fill them out." Both Oscar and Opal agreed that they would recommend the daily recording project to married friends. Opal said she could recommend the project for "analyzing your own feelings." Oscar suggested that "it makes you pay more attention to what you are doing with your spouse."

They both felt the daily recording project was rather beneficial (6 out of 7). Oscar reported that it was somewhat helpful (5 out of 7) in solving marital problems, while Opal reported that it was rather

helpful (6 out of 7). Oscar found the marital research project somewhat interesting (5 out of 7), while Opal found it rather interesting (6 out of 7).

During the debriefing session after posttest, I asked Oscar to describe what was happening during the pleasant times on which he had neglected to comment. He replied that he could not elaborate on "routine" pleasant times except that he watched TV and read the newspaper and Opal was present.

Mr. and Mrs. P

Peter is a 29-year old heavy equipment operator with a high school education. He remained single until he was 24 years old in order to support his parents who are both unemployed and problem drinkers. Paula was 29 years old when they married and is now 24. She finished high school and attended one year of Beauty School. They have been married for 4 years 5 months and have an 18-month old daughter, Penny, who was born with a minor birth defect which required several costly operations to repair, but left no visible scars.

On the pretest Marital Adjustment Scale, the P's scores were below average for the therapy couples with children (Mean = 76.1). Peter scored 71 on the adjustment test with a zero-score for social desirability response bias on the Marital Conventionalization Scale (MCS). Paula scored 61 on the adjustment test with a 6-score on the response bias test. On posttest Peter's and Paula's adjustment scores were 66 and 65, respectively. Maximum score on the adjustment test is 137; maximum score on the MCS is 97. The P's adjustment scores are considered to be low and without response bias.

On the posttest questionnaire, Peter admitted that they almost always disagree on "handling family finances," "demonstration of affection," and "dislike of mate's friends." There were two major differences between Peter's description of their marital adjustment and Paula's, namely, that only she included serious problems with sex and in-laws. She feels that they both find sexual relations "tolerable" and a matter regarding which they "almost always disagree." Furthermore, on both pretest and posttest, Paula cited her in-laws as a cause of serious difficulty in their marriage. During the debriefing session, she explained that Peter's parents are

jealous of her relationship with him. At the time of the marriage, he cut off their financial support in order to support his bride. Apparently in retaliation, according to Paula, they periodically attack her by emphasizing Penny's birth defect (which does not show) and by ignoring her obvious growth and development.

Paula's marital communication scores were markedly lower than Peter's. Although the maximum possible communication score is 138, she scored 39 on pretest and 38 on posttest. In contrast, Peter scored 57 on pretest and 63 on posttest. One item on the Marital Communication Inventory perhaps best characterizes this couple's interaction patterns: Q. "Does he allow you to pursue your own interests and activities even if they are different from his?" A. "Seldom." I inquired about her answer to this question during the debriefing session. Paula explained that she feels they spend "too much time together" because he insists on going everywhere and doing everything with her. He will not stay home to babysit with Penny so that Paula can go grocery shopping. He demands that the three of them go shopping together.

Analysis of the daily recording forms showed that the P's spent 57% of their waking time together during the 14-day period. There are approximately 14,000 minutes of awake time available for interaction during the 14 days, assuming 16 hours and 40 minutes (or 1,000 minutes) awake and 7 hours 20 minutes asleep per day. Of this available 14,000 minutes, Peter and Paula spent a little over 8600 minutes together, which was considerably more than the 5568 minutes, on the average, that the happy couples spent together.

For Peter 84.5% of their time together was positive and only 4% was negative. For Paula, on the other hand, only 76.8% of the time was

positive with 10% of the time negative.

The negative times for Peter were chiefly those times when Paula was angry and/or yelling at him: "She exploded and got mad with me because the baby was crying in the store, she was ready to go home, I was not." On another occasion when she was upset, he said: "I don't like the sound of her voice when she is made. It's too gripe. . . . Gets mad too quick and easy. There are too many things that I can't be specific about." Paula's record of the same period explains the cause of her anger: "I asked him to call gas company last week and get gas, he didn't so we gave out in the night. I was very mad." It was early February.

On quite a few occasions, Peter rated the same time neutral that Paula rated negative. For example, Peter suggested that Paula could improve one neutral period if she would "be friendly and have a little respect for me (her attitude)." Paula, on the other hand, was quite upset at his behavior: "We went to buy materials for making a bulletin board and he bought the wrong stuff. He didn't want to get what I wanted and bought 3 feet too much."

Several of the P's interactions during the first week could be characterized as "overadequate-underadequate" (Gorrman, 1976) since Paula's behavior often made up for faults or deficits in Peter's behavior. She was usually critical of his shortcomings ("sent out to run some errands and forgot to get stamps and pay the babysitter. He could have remembered these things") and she either repeatedly "reminded" him to do things until he did them or she did the tasks herself. When she was overtly angry and critical of him (e.g., when he didn't call the gas company), he became depressed: "We had a fuss and he was depressed.

I think there is something wrong with him. He stayed depressed most of the time."

Peter's depression on Day 3 (Sunday) ("He had a crying spell and was very depressed") ended when she agreed to visit his parents ("My wife was real good and understanding to me all day long.")

On Day 4 (Monday), Peter and Paula reversed roles when Paula got sick "with a virus" and also started her menstrual period. Paula stayed in bed most of the day while Peter "went to the store, helped me fix lunch . . . took care of baby, washed dishes . . . fixed supper for himself, watched the baby for me (6 P.M. until her bedtime)." On Tuesday Peter decided he could return to work after being on "sick leave" for 8 days "to mend his nerves." After work he continued to do all the housework and take care of Penny so that Paula could rest. His rating of happiness-with-self rose from 2 (out of 9) on Sunday to a 9 (out of 9) on Tuesday. For seven of the remaining eight days, he rated himself as very happy (9). Paula's response to the change in Peter was very positive: "came home in a good mood, thank goodness." Overall, he became more helpful, more talkative, and more optimistic about their future.

During the second week Peter's overall daily ratings of marital happiness averaged 8.0 (out of 9). They had three more arguments during the week but the marital distress (for example, "we had a fight and he pouted") was of shorter duration (that is, 1 hour 15 minutes) and ended when "we sat down and discussed our problems after our fight." Two of the arguments involved Paula's complaints about Peter's inability or unwillingness to assert himself with his parents and brother when they dropped in twice unannounced and uninvited, woke the baby, and then left

without seeing their grandchild after she had been awakened by their arrival. During the debriefing session, an agreement was negotiated in which Peter agreed to tell his parents that they were not to call or come over unless they were sober. This was an acceptable compromise for Paula.

Analysis of the ratios of positive time to negative time indicated that, first, Peter enjoyed 2-1/2 to 3 times as much "benefit" (positives outweigh negatives) from the relationship as Paula did; and second, that from Week 1 to Week 2, the positive time increased while the negative time decreased, so that the positive/negative ratios were 3 times higher the second week for both Peter and Paula. Peter's positive/negative ratio rose from 12.7:1 to 44:1. Paula's ratio jumped from a marginal 4.7:1 to a comfortable 17:1.

On the reaction sheets, the P's agreed that they would recommend the daily recording procedure to married friends. Peter qualified his recommendation: "if they have married problems." Paula added: "so they could tell someone how they feel about something without hurting someone's feelings." They both felt that the recording procedure was slightly beneficial (5 out of 7). Peter felt that the project neither made marital problems nor solved them (4 = neutral). Paula felt that the project was slightly helpful in solving some marital problems (5 out of 7). Peter found the project somewhat interesting (5 out of 7), while Paula felt it was rather interesting (6 out of 7).

Peter made the following suggestions for improving the forms: "after you have filled out the daily record sheet, just be able to write in the comments section what you feel." This is apparently a response to the questions which ask the participant to identify the specific behaviors which affected the ratings. Pinpointing specific "active ingredients"

in a marital interaction interval is an unfamiliar task for most couple and is time-consuming. However, the data suggest that the research and clinical benefits outweigh the response-cost to the participants, providing they are willing to undertake the task.

Mr. and Mrs. Q

Quincy is a 27-year-old veteran who is working toward his bachelor's degree and is supporting the family on G. I. educational benefits. Queena is a 27-year-old housewife who enjoys sewing, embroidery, and needlework. The Q's have been married for 5 years 10 months and have a 16-month-old daughter, Qiana. They live in a small apartment in university-owned housing.

While Quincy and Queena had very similar pretest Marital Adjustment scores (90 and 87, respectively), her score may have been somewhat inflated by social desirability response bias. Her response bias score on the Marital Conventionalization Scale was 21 on both pretest and posttest. Her posttest adjustment score rose by 17 points to 104, even though there was no change in Quincy's score at posttest (that is, 90 again). In any case, both their adjustment scores were well-above average for the therapy couples with children (Mean = 76.1).

The Q's agreed that the following problems have caused serious difficulty in their relationship: Queena's desire to have a second child, difficulties over money, different amusement interests, and constant bickering. To this list of problems, Queena added: ill health (unexplained), religious differences, and mate's attempt to control my spending money. Occasionally they disagree about sexual relations, which, at times, are only "tolerable" for Quincy.

On the Marital Communication Inventory, their scores were about average for the therapy couples with children, although Queena's communication score was higher than Quincy's at pretest and it increased 12 points

more at posttest. Again the social desirability response bias scores suggest that her communication ratings may also have been inflated, although not enough to be invalid.

Of the 14,000 minutes available for husband-wife interaction over the 14-day recording period, they spent approximately 6,400 minutes together. For Queena 78 percent of that time was positive, although only 55 percent of the time was positive for Quincy. In at least 17 interaction segments, the time which was rated as positive for Queena was neutral or negative for Quincy or vice versa. Several of these discrepant segments encompassed an entire afternoon or evening. While the total amount of pleasant interaction time is comparable to the totals found among the happy couples in this study, the fact that the time was generally not mutually pleasant for both partners differentiates this couple from the couples in the happy group.

The first noticeable trend in the data is that Queena recorded her data between 8 and 10 P.M. after she finished the dinner dishes and put Qiana to bed. Unfortunately, she neglected to add four interaction intervals that occurred after 10 P.M., although these intervals were recorded and described by Quincy.

At 7:30 A.M. Friday morning, Day 2, Queena began "bugging" Quincy about having a baby: "He could have been more opened minded about the fact that I wanted to talk about planning another child -- he is negative to the idea." She tried again at 1 P.M.: "He was still negative about talking about the possibility of having another child." She tried again Saturday morning. His reaction was neutral rather than negative.

Sunday morning was positive for Quincy since Queena did "no complaining." At 11:30 A.M. they had sexual relations. The rest of the day

was mutually pleasant. For her, the most positive behavior was that "He was home for dinner on time." They worked together to get Qiana ready for bed.

Monday, Day 5, was mutually positive. According to Queena the lack of a negative comment was positive: "He didn't complain about the dinner." For Quincy, the most positive behavior was when she "said 'Please'" when he offered to carry the laundry upstairs for her.

On Tuesday she tried again: "He got annoyed when I mentioned having another baby." That evening was positive for Quincy because there was "no yelling in a disagreement." She did not mention it on Wednesday. On Thursday she tried again at breakfast. Quincy wished she would "quit pestering me about another kid."

Friday morning was mutually positive when they had sexual relations. In the afternoon they both enjoyed going to an art show. That evening was negative because of "His lack of interest to be home for dinner on time." Quincy commented that she would not accept his apology.

Saturday afternoon, Day 10, she brought up getting pregnant again. For Quincy the afternoon would have been more pleasant if she would "keep her promise about not talking about having a baby until September." It was February. For Queena, on the other hand, the afternoon was pleasant because he "got a friend to look at my sick plant."

On Sunday morning, they again both enjoyed having sexual relations. In the afternoon they looked at some snakes and insects for Quincy's collection.

Monday evening was neutral for Queena, but positive for Quincy. Again the lack of a negative behavior was perceived as pleasant: "Didn't

mind me going to sleep early without her (7:30 P.M.)." For Queena, the lack of a positive behavior made dinnertime less than pleasant. "He could have talked to me during dinner instead of reading the newspaper."

On Tuesday, Day 13, the lack of negatives made the afternoon and evening pleasant for Queena. In the afternoon she said: "He didn't get mad at me for not being home on time." In the evening she said, "He watched TV with me instead of with the neighbors." The afternoon was very unpleasant for Quincy because of Queena. She could have "come home on time so I wouldn't be late for a midterm (exam)." In the evening, the interaction was neutral because he wished she would "quit acting so pitiful every time I say I'm going to someone's house." Fortunately, Quincy was willing to dismiss her unpleasant behavior: "She's having her period not so I'm sure some of her erratic behavior can be attributed to that."

On Wednesday, Day 14, the entire day was pleasant for Queena since Quincy "appreciated the bugs I caught for him." He helped fix dinner and took her to a plant exhibit. On the other hand, Quincy ran the full gamut from positive ("Caught me some good insects") to negative ("giving me a bunch of crap about filling out these forms"). His urgent plea was that she "quit bothering me when I'm studying."

Because Quincy was a student and Queena was a full-time housewife and mother, they were able to have breakfast together each of the 14 days. On nine of the days they were also together at lunchtime. They also had dinner together every evening, although attention was split among Qiana, the news on TV, and the newspaper.

The semilog graph of the interaction times pointed to an interesting trend in the data. During Week 1, Queena's positive/negative ratio was

higher than Quincy's ratio by a factor of 2.2 (that is, 42 to 1 compared with 18.6 to 1 or $42/18.6$). During Week 2, Queena's positive/negative ratio was again higher than Quincy's ratio by a factor of 2.2 (22 to 1 compared with 10 to 1 or $22/10$), despite the marked decrease in the ratios the second week. The striking characteristic of these ratios is that Queena's ratings were higher than Quincy's by a factor of 2.2 both weeks. When Quincy's ratio decreased from 18.6 to 10 (a factor of 1.86), Queena's ratio decreased from 42 to 22 (a factor of 1.9). Queena's tendency to rate the time as pleasant more frequently by a factor of 2.2 is consistent with her higher daily ratings of marital happiness (on a scale from 1 to 9). Her daily ratings averaged 7.28 while Quincy's ratings averaged 7.0 over 14 days.

On the reaction sheets, neither Quincy nor Queena said that they would recommend the daily recording project to any married friends. Queena's only comment was "Depends on results," which apparently refers to the fact that they had not as yet been given feedback on the data they had collected. They both felt that the marriage research project had neither made marital problems, nor helped solve them (4 = neutral). While Quincy felt that the daily records were neither detrimental, nor beneficial (4 = neutral), Queena felt that the recording procedure had been somewhat beneficial (5 out of 7). For Quincy the research project was somewhat boring (3 out of 7); for Queena it was neither boring nor interesting (4 = neutral). The Q's apparently associated the decrease in positive time relative to negative time with her menstrual period and his midterm exams rather than associating the change with participation in this study.

Mr. and Mrs. R

Roy is a 33-year-old public relations representative and works about 50 hours per week. His degree is in Journalism. Roberta is a 29-year-old teacher who also works 50 hours per week. When they married, he was 28 and she was 23 years old. They have been married 5 years 8 months. Their son, Roy, Jr., is now 3 years old. Their daughter, Robin, is 21 months. The R's own their own home.

On the Marital Adjustment Test, Roy and Roberta were slightly below average for the therapy couples with children (Mean = 76.1). Their score improved slightly on posttest but did not reach the posttest mean for their group (Mean = 82.9). There was no evidence of social desirability response bias on either pretest or posttest for either of them.

The R's agreed that the following areas caused serious difficulties in their marriage: unsatisfying sex relations, selfishness and lack of cooperation, lack of mutual affection, lack of communication, matters of recreation, and the amount of time that should be spent together. On the adjustment test, Roberta also added that she had "become familiar with another person."

On the Marital Communication Inventory, Roberta's scores were approximately 20 points higher than Roy's. The main difference in their communication styles is that Roberta "doesn't hold back" so that she communicates her feelings, her complaints, and the events of her day. Roy does not share his thoughts and feelings with her. His comment on the adjustment test was that his "lack of assertiveness" was a serious problem.

Over the two-week recording period, the R's spent only 25 percent of their time together. Of that time, Roy rated 58 percent as positive while Roberta rated 50 percent as positive. The therapy-couples group who were parents averaged spending 37.6 percent of the time together, with 60 percent of the time together rates as pleasant. On the Daily Rating Scale, Roy and Roberta averaged 5.14 and 5.36, respectively. The therapy parents as a group averaged 6.6 out of 9. Roy and Roberta had the lowest daily ratings in the group. Furthermore, Roberta had the lowest rating on satisfaction with her work (4.6 out of 9) of the 40 participants in the study.

The first obvious pattern that stands out on the daily records is that Roy and Roberta separate each evening as soon as they put Roy, Jr., and Robin to bed. On the evening of Day 2, Roy went out to a party alone, which was encouraged by Roberta: "The party was put on by a professional group he belongs to. I want him to get out, meet people, have experiences, have a good time without the need always to have me around." She had commented on the pretest adjustment questionnaire that Roy's dependence on her for the "satisfaction of all his needs" was a serious problem in their relationship.

Early on Day 3, Roberta started her menstrual period which affected her mood for several days. Their comments illustrate the impact that one spouse's feelings and behavior can have on the other spouse. Roy's comments about Day 4 were: "Wife started period, affected her overall physical feelings." From Roberta's point of view, "Roy was very helpful and cooperative which really saved my day from being a disaster. I am both physically and emotionally down."

Many of Roberta's comments about the neutral and negative times were complaints that Roy had omitted positive behaviors that she would have liked: "could have said 'Good morning,'" "could be more positive about himself and others," and "no response to my 'Happy Valentine's Day.'" Their communication problems stem in part from her high rate of "constructive criticism" and her lack of compliments to him. Repeatedly she tried to coerce him into a conversation with her. On several occasions, when he complied, she complained that he was annoyed and defensive. He apparently punishes her attempts to force him to "improve" himself and to carry on "interesting conversations" with her by withdrawing into silence. This cycle continues when his silence provokes her anger which is vented as nagging and thinly veiled "constructive" criticism. As the passive partner, Roy can begin the cycle by simply saying, "Good morning" when they get up. While his silence and passivity are in part punished by her incorrect "mind reading" of his thoughts and feelings, he is in part rewarded by gaining her undivided attention without competing with her in conversations she could easily dominate.

Their usual interaction pattern, "passive partner" (Gottman, et al., 1976) was temporarily interrupted by her need for him and for his help during her period and when she cut her finger (which required stitches) on Day 7. The pattern was resumed as soon as her period ended and her finger healed. This pattern differs somewhat from the "overadequate-underadequate" pattern described previously in that he controls her behavior by not saying anything rather than by not doing anything.

Roy's positive/negative ratio was 5 to 1 over both weeks of recording. Roberta's positive/negative ratio was 7.7 to 1 the first week, but

dropped to 4.7 to 1 the second week.

On the Reaction Sheets, the R's agreed that they would recommend the daily recording project to married friends. Roy would recommend it "to reveal their communication habits." Roberta would recommend the project, "For their information to do with as they please."

In order to improve the daily recording forms, Roy suggested adding "a fourth color to indicate all activities alone or otherwise." Roberta suggested: "Make time lines vertical with more space for what is going on and reaction to it in same place."

They both felt that the recording procedure was rather beneficial for their relationship (6 out of 7). Roy felt that the research project was rather helpful in solving marital problems (6 out of 7), although Roberta said it was only somewhat helpful (5 out of 7).

Roy said he had been "very interested" in participating in this marital research project (7 out of 7), while Roberta reported being "rather interested" (6 out of 7).

During the debriefing session, Roberta complained that she did not feel that it was fair for the mental health clinic to charge them money for participating in a marital research project, especially when I did the analysis and gave the feedback and was not paid.

Mr. and Mrs. S

Sam is a 30-year-old high school coach who works 54 hours per week. Sara is a 29-year-old college senior who has been married previously and divorced. She first married when she was 21. The marriage lasted 18 months, but they only spent 4 months together because he was in the military. When Sam married Sara, he was 25 and she was 24 years old. After 5 years 4 months of marriage, they have a 4-year-old son, Skip.

On the Marital Adjustment Test, the S's scored well-above the average for the therapy parents group (Mean = 76.1). Sam's pretest adjustment score, 85, rose on posttest to 99. Concurrently, his Marital Conventionalization (lie) Scale score rose from 15 to 50 (Maximum = 97). While the posttest score suggests some inflation due to social desirability response bias, it is within one standard deviation of the mean calculated by Edmonds (Mean = 34, SD = 30). Sara's pretest adjustment score of 82 rose to 91 at posttest. Her conventionalization score rose from 4 to 9, pretest to posttest, and both scores are considered "candid."

Both Sam and Sara agreed that they had problems due to "lack of mutual friends" and "unsatisfying sex relations." Sara added "constant bickering," lack of mutual affection," and "mate's occupation." Sam, on the other hand, added different problems to the list: "Mate became familiar with another person," "Mate's attempt to control my spending money," and "Desire to have children."

On the Marital Communication Inventory, Sam scored 10 points lower than Sara on pretest, but gained 17 points on posttest. Their scores at posttest were 75 and 72. The mean for the therapy-parents group was 70.8 at posttest, so they were slightly above the average.

On the Daily Rating Scale, Sam's ratings averaged 6.8, although Sara's averaged only 5.8 for the same recording period. They spent only 22.9 percent of their awake time together. This was the least amount of interaction time among the therapy couples with children. Furthermore, they had the least amount of positive time together among the therapy parents (that is, 31.9 percent).

The ratio of positive time together to negative time together was 7 to 1 for Sam but 3.9 to 1 for Sara. This ratio was affected by the differences in their quality of time ratings. Sam rated 45 percent of their time-together as pleasant, although Sara rated only 19 percent of that time as pleasant. Sam's positive/negative ratio was 8.9 to 1 the first week, but decreased to 5.4 to 1 the second week. In contrast, Sara's positive/negative ratio was 3.5 to 1 the first week, but increased to 4.5 to 1 the second week. The difference in the trends in their positive/negative ratios is made clearer on the semilog graph of daily totals of each type of interaction. The negative interaction was limited to the first and last days of the recording period. Over the two weeks, Sam reported that neutral time increased positive time decreased. Total time together decreased from Week 1 to Week 2 by approximately 24 percent.

Although the S's spent more time together on Day 1, a Saturday, than they spent together the rest of the recording period, Sara's comment suggests that she did not consider the time as "being with each other." Her description of the 13 hours together was: "Typical Saturday--not much conversation or interaction. Watch TV a lot and I studied some."

Sara was unaware of the two negative intervals that Sam reported regarding their interaction with Skip. Sam reported that between 5 and 6 P.M.

that afternoon, Sara "DID NOT DISCIPLINE our child." At 9:30 P.M. that evening, Sam complained that she "interfered with my putting our boy to bed!"

On Sunday morning, Day 2, they had sexual relations, but without the intimacy Sara wanted: "When we are together it seems like it's physical relief for him. Not a loving act, but just sex." That evening they watched TV in separate rooms.

On Monday, Day 3, Sam worked at school from 7:30 A.M. to 4:00 P.M. and from 5:50 to 10:00 P.M. For 30 minutes, before bedtime, they "sat together in his chair and talked about the day."

On Tuesday, Day 4, Sara's comment described the classic "too little time together" interaction pattern: "We didn't have any conversation or interaction. It came only in minute intervals if we did, and it was nothing that could be graphed. Two 'kisses' (pecks) on the cheek. One 'I love you' and that's about it." Sam's only comment was that "She went to her room to study from 7:00 P.M. till 10:00 P.M."

This pattern of sparse, poor quality interaction continued during the rest of the week. Finally, on the second last recording day, Sara confronted Sam with his excessive absences to watch athletic events. She lamented: "It's always something, he's never at home when he could be."

On the last day, they instituted their compromise. Sara went with Sam to the ballgame, which pleased him. Sam sat with Sara instead of sitting with the other coaches as he usually did when she came. This pleased Sara.

On the Reaction Sheet, Sam and Sara agreed that they would recommend the daily recording project to their married friends to "Make them more aware of their daily life." Both of them agreed that the marriage research

project was somewhat helpful in solving their marital problems (5 out of 7). Sam felt that the recording procedure was rather beneficial (6 out of 7). On the other hand, Sara felt it was only somewhat beneficial (5 out of 7). They both found the project somewhat interesting (5 out of 7).

In her final comment Sara described one reason that they found the daily recording helpful: "Before we would quarrel we would laugh and tell each other that this was going to be a black mark."

Mr. and Mrs. T

This is the last couple in the therapy group. Tim is a 21-year-old veteran who was 18 when he married. He is working toward his bachelor's degree and is helping to support the family with G.I. educational benefits. Tammy was also 18 when they married and is now 21 years old. She works 40 hours per week as an insurance clerk. She has completed high school. The T's have been married for 3 years 8 months and have a 17-month-old daughter, Tricia.

Tim's first marital adjustment score was 8 points below Tammy's pretest score. He showed a dramatic gain from 69 on pretest, to 83 on posttest. He gain was matched by Tammy's, as her adjustment rose from 77 to 88. She showed no evidence of social desirability response bias on either test. Although Tim showed no response bias on pretest, he had some evidence of bias on the posttest (12 points out of 97). This did not affect the validity of the data, since it was well within the normal limits. On the adjustment test, they both checked a number of items which they felt caused serious difficulties in their marriage. Among those items were: religious differences, constant bickering, interference of in-laws, difficulties over money, and selfishness and lack of cooperation. Tammy also added: "drinking," "walking out in anger." They both agreed that sexual relations and ways of dealing with in-laws were frequently sources of disagreement between them.

Their communication scores were well above the average scores for the therapy couples with children (Mean = 65.4 at pretest; 70.8 at posttest). Tim scored 82 points on both the pretest and the posttest. Tammy scored 74 at pretest, but increased to 81 at posttest. Maximum communication

score is 138.

Of the 14,000 minutes of awake time potentially available for husband-wife interaction during the recording period, the T's spent approximately 6,150 minutes together. This was 40.7 percent of the available time. Tim rated 77.7 percent for their interaction as pleasant. Tammy, in contrast, rated only 57.5 percent of the time-together as pleasant or positive. They agreed that 8 to 9 percent of the time-together was negative.

According to their positive/negative ratios of quality of time spent together, the T's relationship was "at risk" during Week 1. Tim's ratio of 3.5 to 1 was only slightly better than Tammy's quality of time ratio, which was 3.0 to 1. During Week 2, the amount of time they spent together increased by about 50 percent. There was a sharp drop in negative time-together and a concurrent increase in positive time-together. Over this second recording week, Tim's positive/negative ratio rose to an average of 34.3 to 1. Tammy's ratio, meanwhile, rose to an average of 48.7 to 1.

The Daily Rating Scale indicated that their ratings of marital happiness were unrelated during Week 1. Tim's ratings averaged 6.7 but Tammy's averaged 3.0. On days that Tim rated the relationship at the maximum level of happiness, that is, 9 out of 9, Tammy rated the relationship that day as "below average," that is, 4 out of 9. During Week 2, the daily ratings were quite similar so that, by the end of the week, Tim's ratings averaged 6.7 and Tammy's ratings averaged 7.0.

On inspection, it would appear that the T's spent a relatively large amount of time with each other. They had breakfast together on weekdays and spent most evenings together. However, the lack of weekend time-together distinguishes them from the happy couples since they spent less

time together on the first weekend rather than more. This was remedied the second weekend and their marital satisfaction ratings rose accordingly.

The second pattern which distinguishes their interaction from that of a happy couple is the repeatedly discrepancy in the quality of time ratings. Each time that a lengthy interval was positive for Tim, it was only neutral for Tammy.

Content analysis of the daily reports indicated that their evenings during the first week were spent "together," but not alone together. They had company one night, visited friends the next evening, and watched TV the third. Saturday evening consisted of a 5-hour argument: "He had a very bad attitude and ruined my entire evening. I had no desire to be with him. It lasted all evening mostly because I was so mad and hurt at the same time. He would not understand my disappointment in him being gone all day (Saturday) and again Sunday." Despite the conflict between them over Tim's racquet ball tournament and softball practice all weekend, they had sexual relations 6 times during the first week and it was mutually positive each time.

During the second week, Tim was very proud of being on his good behavior. Six nights that week they had friends or relatives for company or went to visit them. None of the time was one-to-one intense interaction. When they were home alone together, Tim watched TV.

During both the pretest and posttest, it was noted that Tim sat within 5 feet of either the TV or stereo and insisted that one or the other be on during my visit. It was learned that he finds "silence" aversive and is dependent on TV, the stereo, and friends to "fill in" the quiet times. It was also learned that Tammy had no social activities

outside the home and visits only with relatives. Being totally dependent on Tim for companionship, she finds his prolonged absences (to participate in sports) highly aversive. She has tolerated this situation since Tricia's birth, because she felt she had no alternative.

On the Reaction Sheet, Tammy explained the problem she had with specifying a particular behavior as the most positive or least desirable. She said: "There are so many times when you feel that you're in a pleasant atmosphere with nothing having to be done or said."

While both the T's said they would recommend the daily recording project to married friends, Tim qualified his recommendation: "only if they needed help." Tammy said she would recommend the project. . . . "If nothing but to make you realize how your feelings affect your marriage. When you write it down you can see how good or bad you're doing in your daily marriage."

For Tim, the recording procedure was slightly detrimental (3 out of 7), yet also somewhat helpful in solving marital problems (5 out of 7). For Tammy, the recording procedure was somewhat beneficial (5 out of 7). She felt that the marriage research project neither made problems for their relationship, nor helped to solve them (4 = neutral).

Tim rated his interest in participating in the marriage research project as neutral (4); it was neither boring, nor very interesting. Tammy rated her participation as somewhat interesting (5 out of 7).

During the debriefing session, when feedback was given to the couple, Tim was asked to summarize how their marriage had changed. He explained that their relationship had been better before Tricia was born: "Before Tricia, she (Tammy) was able to go more and spend more time together

such as football and softball practice games." He had not changed his schedule of activities after the birth of their daughter.

This concludes the case study section of the Results chapter. The following chapter will discuss some of the practical and theoretical implications of the data presented here.

CHAPTER IV

DISCUSSION

Clinical Practice Implications

This section suggests some of the implications this study may have for the use of the Marital Satisfaction Time Lines in clinical practice.

The therapy group was found to be comprised of two types of couples: (1) eight couples who spent "too little time together" compared with happy couples (that is, over 14 days, an average of 4,370 minutes per couple versus 5,568 minutes per happy couple); (2) two couples who spent "too much time together" compared with the happy couples (that is, over 14 days, an average of 8,700 minutes per couple versus 5,568 minutes per happy couple). These two distinct dysfunctional patterns warrant different intervention schemes. While the first pattern may be indicative of excessive involvement in activities outside the home by one or both partners, the second pattern as demonstrated in this study suggests an excessive unilateral dependence by one partner upon the other. No research data is currently available as to the likelihood of couples with excessive mutual dependence seeking marital therapy, although some clinical evidence suggests that these couples who ordinarily spend "too much time together" may seek therapy if that amount of interaction is threatened or diminished.

The ratio of positive time to negative time was 15.3/1 for happy couples and 6.3/1 for the eight therapy couples in the "too little time together" group. The responses to the question "what could he (she) have

done to make your time together more pleasant?" suggest that the positive/negative ratios could be greatly improved by upgrading the neutral time to positive. While the happy spouses spent an average of 37 percent of the available time with each other, 69 percent of the time-together was positive. On the other hand, while the "too little time-together" couples spent an average of only 29 percent of the available time with each other, only 50 percent of that time-together was positive, but not necessarily mutually positive for both partners.

As suggested by Robert L. Weiss at the University of Oregon (personal communication), while it is necessary to decrease the negative interaction through marital therapy, that is not sufficient. In order to strengthen the pair-bond, the positive interaction must concurrently be increased. This point may be illustrated by the following analogy: curing the marital relationship whichⁱ is "diseased" by negative exchanges may not be sufficient if the relationship also suffers from "malnutrition," an excess of neutral interactions.

The crux of this study is the relationship between time-together and happiness. The statistical analyses suggest that the amount of time spent together is a function of the happiness experienced during past interactions and anticipated in the future. The behavioral analyses suggest that the amount of happiness experienced is a function of the amount of time spent together such that, in some cases at least, a threshold may have to be reached before the interactions become better than "routine" or neutral. In clinical practice, dysfunctional patterns may need to be carefully analyzed to determine if the lack of time-together is affecting quality or if the lack of quality is affecting time-together or both.

Finally, identifying specific dysfunctional patterns may be important for clinical practice. Among both the happy and the distressed couple the results indicated husband-wife agreement on the general levels of marital adjustment and communication as measured by the global, retrospective questionnaires. However, while couples in both groups agreed on the overall state of their relationships, the distressed couples disagreed sharply on the hour-by-hour, day-by-day ratings of the quality of their interaction.

As described in the case studies, some of the discrepancies were the result of omitted positive behaviors (e.g., not introducing one's spouse when colleagues come to the house) and committed negative behaviors (e.g., criticism of task completed and repeated reminders about tasks to be done). During the debriefing interviews it was learned that, in the case of the omitted positive behaviors, the offending spouses were seldom, if ever, effectively told of the particular omission and the hurt feelings it had generated. In the case of the committed negative behaviors, the most common pattern was for the recipient to rate the interaction as negative because of the criticism and/or nagging, while the instigator rated the interaction on the basis of the effectiveness of his/her demands in generating compliance. If the criticism generated an apology or if the nagging resulted in the completion of the desired task, then the instigator was rewarded and the rating was positive. If, on the other hand, he or she was frustrated by an unsuccessful change-attempt, the rating was neutral or negative.

The clinical applications of the identification of these discrepancies are important. If specific positive behaviors are omitted (e.g., "thank you's," compliments, social introductions), the "forgetful" spouse may need to be reminded by nonoffensive cues or signals ("Honey, I don't

think I've ever met your boss.") If specific negative behaviors are committed, the unsuccessful change-demands can be pointed out and more effective communication and/or contingency management can be substituted.

First described by Patterson and Reid (1970), the most significant interaction rating discrepancy to be identified for clinical intervention is apparently the most subtle, the most stable, and perhaps the most destructive: begrudging compliance with the coercive demand. The one whose demands are met is rewarded directly. The compliant partner is partially rewarded by the withdrawal or cessation of the demands (negative reinforcement), but is also partially punished by the coercive nature of the interchange ("I did what you wanted, but I very much resented doing it.") Again, the coercive interaction may produce a discrepancy in the husband-wife ratings of the quality of that interaction with pleasant ratings from the demanding partner and neutral or negative ratings from the compliant partner. Using the time line to identify the day, date, time, and major on-going activity, the therapist can pinpoint the specific dysfunctional patterns and suggest alternative methods of achieving desired goals. Other implications which the results from this study may have for the use of the Marital Satisfaction Time Lines in clinical practice include the identification of cyclic patterns of interaction. The traditional weekday versus weekend pattern was seen in most of the happy couples and many of the therapy couples. The critical factor was whether the work schedule of one or both partners permitted unrestricted leisure on Friday night, Saturday, and Sunday. Couple C demonstrated an exaggerated version of this pattern. The week begins Monday with a moderate amount of parallel activity which decreases to a low point on Friday. On Saturday and Sunday there is intensive interaction for prolonged periods (i.e., 11.9

hours per day with 10.8 hours rated as pleasant). After this intense weekend exchange, the cycle begins again on Monday with parallel activities.

In another example, Couple H demonstrated that, as the weekday interaction decreased from Week 1 to Week 2, from an average of 4 hours 9 minutes per day to 2 hours 33 minutes per day, the weekend interaction increased from an average of 11 hours 45 minutes per day to 12 hours 45 minutes per day.

Other interesting patterns occur more frequently, including twice daily contact on weekdays. Even though one spouse is away the major portion of the day, contact is not limited to the evening hours only. In some cases, the contact includes breakfast and evening (cf. Couples B, C, D, and J), or lunch and evening (cf. Couple E), or phone calls and evening (cf. Couple I). In the last case, it is important to note that the phone calls are made by the spouse at work to the spouse at home so that the call does not become a nuisance by interrupting the higher rate "at work" behavior. The person at work has the opportunity to prepare himself or herself for the "break" in activity, whereas an unexpected phone call from home can disrupt concentration and on-going activities like conferences. If both partners are at work, the person with the denser schedule can make the call to the person with the less dense schedule at a prearranged time (e.g., between 12:15 P.M. and 1:00 P.M.).

Another important pattern was observed in Couple C. This couple has set aside "winding down time" after work, so that they reach comparable slower rates of activity before they try to interact and/or debrief on the events of the day apart.

Couple E demonstrates still another interesting pattern, that is, the "end of day recap." In this pattern couples involved in parallel activities during the late afternoon and evening set aside the final hour at the end of the day, but before bedtime, to re-establish intimacy through a sharing of thoughts and feelings.

Another important pattern for some couples involves the "tone" that the day takes from time they wake up until they finish breakfast. As was seen in Couples L and M, the day was ruined by a morning headache, a car that would not start, and a broken muffler. For Lauren and Maureen, having a "bad morning" generally meant having a "bad day."

Couples K and Q demonstrate the detrimental effects of once-a-day nagging. While Karla had some temporary success with Keith's beer drinking, Queena had no success with her campaign for a second baby. As an attempt to change a spouse's behavior, nagging is usually ineffective and frequently harmful to the relationship. It appears to be maintained by the "one time he didn't have a beer" and the promise "we'll talk about a baby in September" which act as half-hearted compliance to temporarily turn off the stream of repetitive requests. The net result can eventually be avoidance of the nagging partner.

Several couples illustrate a "threshold effect" in their interaction such that they need to spend more than a certain amount of time together (e.g., Couple A needs more than five hours together) before they "get into" their relationship and report predominantly mutually positive interaction. This pattern may overlap with the weekend/weekday pattern in some couples, since they may need the extended periods of interaction on Saturday and Sunday to go beyond meals, routine childcare, personal hygiene,

and household chores. A reverse pattern is seen in Couple B, who apparently have minimal latency or delay before the beginning of mutually positive interaction. Since Burt and Brigid did not as yet have any children and Brigid usually completed the household chores while she was home during the day, their evening hours together were available for communication and joint projects. Having maintained a high frequency of mutually enjoyable communication, there is apparently so little decay ("being out of touch") from one day to the next that the response cost for starting a conversation is minimal.

Two other patterns were observed which are transactional and have been described previously. In a pattern referred to by Mace (1976) as the "Love-Anger Cycle," Doris and Darren went from closeness and sharing to seeking or comforting to disappointment and rejection to estrangement to angry encounter to apology, then back to closeness. At the end of the two-week recording period, they had repeated the "closeness--comfort-seeking--disappointment and rejection" phases a second time. The data were inadequate to determine the average length of this cycle in the D's, or if the cycle repeats with variations on the same theme.

The second transactional pattern, the "overadequate-underadequate" couple, was illustrated by Gottman (1976) in a teaching film published by Research Press, "Three Styles of Marital Conflict." As noted in Couple P, the style or pattern of interaction completely reversed when Paula "got the flu" and started her period, so that Peter took over in the "overadequate caretaker" role until Paula's recovery. This interaction style can be easily identified on the time-lines. However, a longer recording period is needed for a better understanding of situational or environmental events which make the pattern more likely to occur in a particular couple.

Apparently, Peter's job stress helped to precipitate his "inadequate" behavior during the first week of recording. Perhaps, the antecedent events could be identified and, where possible, avoided or alleviated.

In using the Marital Satisfaction Time Lines in clinical practice the marital therapist can become more sensitive to what each client means when he or she refers to "a good time" or "a neutral time." By comparing the time-line ratings with the social desirability response bias data, it has become clear that some participants tend to rate every interaction as "pleasant" unless there is an overt argument. This rating style is consistent with somewhat inflated, but not invalid, response bias scores. Other participants tend to center their ratings at "neutral" unless something extraordinarily good or bad occurs. The advantage of the time-line data is that each client generates his or her own idiographic norm or base level. The time-lines are then sensitive to any movement above or below that level.

Content analysis of the descriptions of "pleasant," "neutral," and "unpleasant" behaviors reported by the couples showed a marked difference in the operational definitions used by the happy couples compared with the therapy couples. While the behavioral descriptions could by no means be sorted into mutually exclusive categories on the basis of marital adjustment level, many of the "pleasant" behaviors described by the happy couples involved the presentation or commission of positive behaviors. In contrast, many of the "pleasant" behaviors described by the therapy couples involved the omission of negative behaviors. The former case was illustrated by Ilene: "He fixed lunch for us. He took time to go to the playground with the baby and me." The latter case was illustrated by Nick: "Didn't

crab at me for sleeping late" and by Quincy: "Didn't mind me going to sleep early without her (7:30 P.M.)."

Again, while the behavioral descriptions could not be sorted into mutually exclusive categories strictly on the basis of marital adjustment level, many of the "unpleasant" behaviors described by the happy couples involved the omission of positive behaviors. In contrast, many of the "unpleasant" behaviors described by the therapy couples involved the presentation or commission of negative behaviors. The former case was illustrated by Jenifer: "He didn't help me out with daughter when I was on the phone, she was cutting up and crying" and by Helen: "could have talked to me, showed affection." The latter case was illustrated by Opal: "very rude to one of my friends -- fought about it from 5-6 P.M. as he is never nice to my family or friends -- also ignored me when he came home." This excerpt from Opal's data illustrates the next point, which is that these positive and negative omissions and commissions often occur simultaneously.

In the previous excerpt, Opal complained about Oscar's rudeness which is the commission of a negative behavior. However, she also complained about the omission of a positive behavior: "also ignored me when he came home." Another example of the concurrence of these behaviors is found in Ilene's lament: "Overlooked the work I did, and picked up on the one thing I didn't do." Again, this is the omission of a positive with the commission of a negative, apparently having double negative impact. In Figure 2, the hypothesized relationship among these four types of behaviors is shown schematically. At the far left are the most pleasant interactions in which most positive behaviors are committed and most negative behaviors are omitted. At the far right are the most unpleasant interactions

in which most positive behaviors are omitted and most negative behaviors are committed. The present data suggest that dyadic interactions are arranged along this continuum with none of the four types of behaviors completely absent from any relationship, but that the level of marital adjustment is a function of the prevalence of each type of behavior. Further research is needed to support or disconfirm this theoretical model.

The final note on the implications for clinical practice is that the dyadic interactions must be considered in the context of the situational and environmental factors which impinge on the relationship. Whether it was Doris' dental appointment, Opal's morning sickness, or Burt's call schedule at the hospital, the situational stimuli which affected the health and well-being of one partner also had significant impact, direct or indirect, on the other partner and on the relationship as a whole. As a further example, it may be significant that Queena "bugged" Quincy about planning another baby only during the week immediately prior to her menstrual period, despite their financial hardship and her promise to "wait til September." Through daily recording of husband-wife behaviors, the clinician can be alerted to the situational factors which are possibly contributing to problematic behaviors and which may warrant further investigation.

Clinical Research Implications

The methodology used in this study appears to have several important implications for clinical research in both marital interaction and marital therapy. As shown in the case studies, Edmond's Marital Conventionalization Scale is a valuable adjunct to the Locke-Wallace Marital Adjustment Test.

Since the conventionalization scale quantifies social desirability response bias, it is useful in the analysis of discrepant husband-wife scores. In each case that one spouse had an adjustment score markedly higher than the other spouse, the social desirability response bias score corresponding to the higher adjustment score indicated a tendency to inflate evaluations of the marital relationship. This rating style was further demonstrated by the Daily Rating Scale data and by the Marital Satisfaction Time Line data.

In general, the inflated rating style is more prevalent among couples with higher marital adjustment scores. Statistical analysis of the pretest husband-wife conventionalization scores showed that the happy couples had significantly higher response bias scores with more discrepancy between the husband and wife scores ($p < .01$). This implies that the therapy couples as a group had lower, more candid scores which were similar because neither spouse subscribed to the "impossibly happy" statements on the response bias scale. However, it should be emphasized that not all couples seeking marital therapy have the very low levels of marital adjustment associated with the very low response scores. Therefore, it is imperative that both the clinician and the researcher be able to discriminate between husband-wife adjustment score differences due to rating style which have little clinical significance and husband-wife adjustment score differences due to distress or dissatisfaction experienced by only one of the partners which have considerable impact on the marital relationship.

Another kind of rating style which is important in clinical research is the avoidance of "always" and "never" response categories. Some participants of couples (cf. Couple K) were handicapped by the avoidance of the "never" category of the Marital Communication Inventory, since half

of the items are weighted in favor of "never" while the other half are weighted in favor of "usually" responses. There is a tendency for interpretative errors when absolute terms like "always and "never" are used without an operational definition, since some participants may assume that "never" really means "almost never," while other participants take the "never" literally. Perhaps the frame of reference for the Marital Communication Inventory could be standardized as follows: never = 0 to 20 percent; seldom = 20 to 40 percent, sometimes = 40 to 60 percent; usually = 60 to 80 percent; and always = 80 to 100 percent.

Another rating style involves male-female differences in responding on the Marital Conventionalization Scale. The happy husbands showed an opposite and significantly different ($p < .05$) response bias from the therapy husbands. At pretest the husbands in the happy-couples group had scored significantly higher than the husbands in the therapy-couples group by subscribing to impossibly happy descriptions of their marriages. The therapy husbands, in contrast, scored in the very low, candid range which is consistent with their having already publicly admitted marital problems via entering marital therapy with their wives. The inflated scores of the happy husbands dropped an average of 5.7 points, while the deflated scores of the distressed husbands rose an average of 3.3 points. The wives showed a reverse (but nonsignificant) trend in response bias with the happy wives increasing slightly, while the therapy wives decreased slightly. These sex-linked patterns suggest that significant differences in responding between males and females would be masked by studying only couples' scores which average the individual husband and wife responses.

Another important consideration for clinical research is the possible effect of daily self- and spouse-monitoring on the dyadic

relationship. In order to investigate participants' reactions to the Marital Satisfaction Time Lines, marital adjustment and communication were measured immediately prior to and following the 14-day recording period. It was found that the recording procedure did not significantly change either marital adjustment or communication scores from pretest to posttest. This suggests that the MSTL was nonreactive according to these measures. Analysis of the daily reports of amount and quality of interaction was done using semilog graphs. By inspection, there were no group or general trends toward either acceleration or deceleration over the two-week period. It is concluded, therefore, that the MSTL can be used for behavioral analysis of marital interaction without altering the levels of adjustment or communication and without distorting the quantity and/or quality of interaction which typifies the marital relationship.

An effort was made to assess the participants' subjective reactions to the use of the time-lines. In response to the first question, "What would you change on the daily recording forms to make them more informative easier to complete, or otherwise improve them?", several thoughtful comments were made. Improvements suggested include: allowing more space for describing activities, changing or eliminating the color-code, and eliminating the "neutral" category. It was also noted that several couples combined the colors to make five rating categories rather than just three. By combining "neutral" with "pleasant," they created a code for "better than neutral but less than pleasant." A similar combination was created for "worse than neutral but more than unpleasant." On the suggestion of one research participant, a new five-level time-line was designed and is now in use (see Appendix M).

The second question on the Reaction Sheet elicited reasons why the participants would recommend the daily recording project to their married friends (see Appendix J). As shown in the case studies, the daily recording procedure made many of the participants more aware of their own behavior and their spouses'. Awareness of behavior, however, did not ordinarily result in a measurable change in behavior during the recording period.

The third question on the Reaction Sheet asked for a subjective estimate of the effect of using the time-lines: "On a scale from 1 to 7 (detrimental to beneficial), please rate how beneficial or not the recording procedure has been for your marital relationship." With 4 as the neutral point, the averages were toward the "beneficial" end of the continuum. The happy couples averaged 4.4 out of 7, while the therapy couples averaged 4.9 out of 7.

The fourth question on the Reaction Sheet asked: "please rate your degree of interest or lack of interest in participating in this marital research project." The most interest was shown by the happy couples who were childless (Mean = 5.1 out of 7). The second most interest was shown by the therapy couples with children (Mean = 5.0 out of 7). On the "boring-very interesting" continuum, the happy couples with children showed more boredom than interest (Mean = 3.5 out of 7). A slight degree of interest was shown by the therapy couples who were childless (Mean = 4.4).

The last question on the Reaction Sheet asked: "to what extent has participating in this marriage research project affected problems between you and your spouse?" On a scale from 1 to 7, from "made problems" to "solved problems," the responses averaged 4.2 for the happy couples and 4.45 for the therapy couples. Thus, the responses were slightly past neutral toward the "solved problems" end of the continuum.

The last implication this behavioral methodology has for clinical research is the addition of time and quality-of-time to the assessment of dyadic functioning. Traditionally, retrospective multiple-choice questionnaires have been used to locate couples on a continuum from extreme marital distress to marital bliss. However, these questionnaires are limited by their reliance on memory and global ratings of marital adjustment and satisfaction. More recently, laboratory analog techniques have been used to analyze communication patterns, problem-solving skills, and decision-making processes and have contributed essential laboratory data about particular aspects of the husband-wife relationship. But these techniques, for the most part, take the couple out of the context of their home environment to study their behavior. Some behavioral assessment techniques (e.g., the Marital Interaction Coding System developed by Hops, Wills, Patterson, and Weiss) offer the advantage of measurement in the home, but have the disadvantage of requiring outside observers to make the ratings. In contrast, by having the husband and wife simultaneously record the amount of time they spend together and the perceived quality of that time, the time-lines do not rely on memory, do not take the couple from the normal context of their interaction, and do not require outside observers. Thus the Marital Satisfaction Time Lines offer a valuable, new dimension to the assessment and investigation of marital interaction.

Theoretical Implications

This last section of the Discussion chapter suggests the implications this study has for the development of a theoretical model to explain some of the functional and dysfunctional patterns of marital interaction.

The first implication is that marital adjustment is a curvilinear function of the amount of time-together. This stems from testing of the major hypothesis that happy couples would be significantly different from therapy couples in terms of the amount of time they spend together. Although not predicted by the hypothesis set forth at the outset of the study, it was found that amount of marital interaction is a curvilinear function with regards to marital adjustment. It was predicted that time-together would be a linear function such that happiness and satisfaction would increase as the time-together increases. However, it was found that happiness and satisfaction increase only up to a point, beyond which they decrease. The eight therapy couples, who described themselves as spending "too little time together," averaged only 4370 minutes-together per couple of the 14,000 minutes available during the 14-day recording period. The ten happy couples, on the other hand, averaged 5568 minutes-together per couple, which was significantly more time-together than was spent by the eight therapy couples ($p = .041$). Contrary to expectations, the two remaining therapy couples (Couples K and P) described themselves as spending "too much time together." These couples averaged 8700 minutes-together per couple, which is almost double the amount of interaction time averaged by the rest of the therapy couples. Clinical experience subsequent to the collection of these research data suggests that couples who spend "too much time together" for a small, but important minority of distressed couples who seek marital therapy.

This curvilinear model of marital interaction warrants testing through the collection of normative data from larger numbers of couples at several points along the marital happiness continuum. If these normative

data support this theoretical model, then quantity of marital interaction can serve as an independent variable in the investigation of marital relationships and in the evaluation of the effects of marital therapy.

The second theoretical implication involves the quality-of-time ratios derived by dividing the total number of positive minutes by the total number of negative minutes per participant. The ratio of positive time to negative time was 15.3 to 1 on the average for the happy couples, but only 6.3 to 1 on the average for the therapy couples in the "too little" group. Theoretically, with the exception of Couples K and P, the ratio of positive time to negative time decreases as the risk of separation and divorce increases. The two participants who announced that they had decided to seek divorce (one dropped out of the study on Day 3) had ratios which averaged 1 positive to 3.4 negative (Couple L) and zero (0) positive to 330 negative (Drop-out). Several therapy-group participants, some of whom answered "frequently" to the Locke-Wallace question "Do you ever wish you had not married?", had positive/negative ratios between 1.6 and 4.4 to 1, positive to negative. If the normative data suggested earlier support of this observation, quality-of-time ratios may serve a predictive function in the study of "couples at risk."

Since the design of this study included couples, both with and without children, some conclusions may be drawn as to the effects of children on marital interaction. The happy couples without children showed the maximum positive time-together and minimum negative time-together with a positive/negative ratio of 16 to 1. On the other hand, the happy couples with children showed less positive time, more neutral time, and slightly less negative time (see Figure 1). Their positive/negative ratio was 14 to 1. These parents described more of their time as taken up with routine

childcare, which they felt did not warrant a "pleasant" rating (e.g., feeding and bathing a cranky toddler).

The therapy couples without children (excluding Couple K) showed the maximum negative time-together and the minimum positive time-together. The positive/negative ratio for these childless couples was 4.4 to 1. On the other hand, therapy couples with children (excluding Couple P) showed more positive time-together and less negative time-together, with a positive/negative ratio of 8.8 to 1. These differences in quality of interaction between both happy and therapy couples, with and without children, suggest that children have a moderating effect on the quality of marital interaction. Thus, the happy parents had somewhat less positive interaction, while the therapy parents had considerably more positive interaction than their childless counterparts.

This pattern was repeated in the two therapy couples who spent "too much time together," but with an enlargement of all the cumulative totals. Couple K, the childless couple, had less positive time and more negative time, while the P's, the couple with Penny, had more positive time and less negative time.

It is important to note that, while the parents had lower ratios in the happy couples group, the difference was minimal, that is, 16 to 1 compared with 14 to 1. In contrast, the therapy parents had a positive/negative ratio exactly double that of the nonparents, that is, 8.8 to 1 compared with 4.4 to 1. Normative data on large groups of therapy couples would indeed be interesting to see if the effect of children is substantiated.

The differences in both quantity and quality of interaction between the happy couples with and without children can be explained in part by the descriptive data which suggest that more of the family interaction

was channeled into childcare activities which at times were neutral or unpleasant.

The differences in both quantity and quality of interaction between the therapy couples with and without children can be explained by a cost/benefit analysis of the alternative options available. During a mutually pleasant exchange, both therapy parents and nonparents would be expected to choose to continue or repeat the enjoyable interaction. However, when the interaction is neutral or unpleasant for one or both partners, the differences between being a parent and being a nonparent become crucial. These parent-nonparent differences are of two types: costs and benefits.

Costs will be considered first. When a conflict or boredom arises, the costs of leaving home or locking the bedroom door are presumably greater for the parents than for the nonparents. Furthermore, the costs of continuing family interaction in a conflicted atmosphere are less for the parents than the costs of continuing husband-wife interaction are for the childless couples. Two observations support this formulation.

First, father-mother-child interactions are potentially more diffuse than the intense one-to-one husband-wife exchanges which require more responsive participation by each spouse in order to maintain the encounter. Second, parent-parent-child interactions with preschool children involve clear-cut social role behavior. It should be noted that since the couples in this study were in their twenties and married less than six years, their children were infants and toddlers who were not likely to pose the complex discipline problems that can be disruptive for couples with school-age and adolescent children.

On the other hand, husband-wife interactions involve more complex and ambiguous exchanges in which socially acceptable roles are no longer clearly

defined and can seldom be taken for granted

In summary, couples with children have the option of assuming parental role behavior if their marital roles become conflict ridden, too emotionally charged, or aversive. This option is not available to childless couples!

The second type of parent-nonparent differences involves benefits. When a conflict or boredom arises, the benefits of maintaining family interaction are presumably greater for parents than the benefits of maintaining conflicted marital interaction are for childless couples. The child may be the incentive to "try again to get along with each other." He or she acts as a "buffer," a person with whom both parents can mutually interact without rancor. The childless couples do not have the option of falling back on traditional parental roles as a means of maintaining contact while tempers cool after an argument. In summary, the distressed couples with children derive satisfaction from parental role behaviors as well as using parental interaction as a means to continued physical and social contact until marital conflicts can be resolved.

One of the most important facets of this study is its contribution to the basic understanding of how the marital relationship functions. Before presenting the corollary suggested by these data, it is necessary to briefly review the fundamental behavioral definitions and social psychological theories from which this corollary stems.

The behavioral approach to marital interaction incorporates the social psychological theories of Thibaut and Kelley (1959) and Homans (1961) in its formulations regarding the exchange of rewards and the evolution of interpersonal interaction patterns. Accordingly, each behavior is said to have both "rewards" and "cost" with the most "profitable"

behavior (rewards minus cost) being the one most likely to be repeated. Thus, it is assumed that the individual will always try to maximize his or her gains, while minimizing his or her costs.

Given that married partners try to maximize their rewards, how should we define "reward?" Behavioral theory suggests that both maximizing gains and minimizing cost are rewards (Skinner, 1953, p. 185):

We first define a positive reinforcer as any stimulus the presentation of which strengthens the behavior upon which it is made contingent. We define a negative reinforcer (an aversive stimulus) as any stimulus the withdrawal of which strengthens behavior. Both are reinforcers in the literal sense of reinforcing or strengthening a response. Insofar as scientific definition corresponds to lay usage, they are both "rewards."

Thus, the presentation of the commonly accepted primary reinforcers (foods, liquids, sexual gratification, and novelty) and the withdrawal of the reciprocal aversive states (hunger, thirst, sexual deprivation, and boredom) are both said to be rewarding. These particular reinforcing stimuli, however, do not necessarily require direct interaction with another human being, as in the case of a TV dinner, a bottle of wine, masturbation, and a good book. Another very important class of rewards or reinforcers are specifically a function of social interactions and cannot be experienced in isolation. These social rewards include attention, affection, approval, and submission (or compliance) (Skinner, 1953, p. 79).

When a particular person is temporally paired or closely associated with a number of both physically gratifying and socially rewarding stimuli, then that person becomes a "rewarding person" or a generalized conditioned reinforcer. Two important implications follow from this concept. First we say we "like" or "love" the generally rewarding person; and second, we will make an effort to spend time with the person who generally rewards us.

The first corollary has been termed the reinforcement-attraction hypothesis, "we will like those who reward us and dislike those who punish us," and has been adequately documented in the literature (reviewed by Berscheid and Walster, 1969, p. 52; Stuart, 1969, p. 675). Attraction and liking are said to be associated with the exchange of positive behaviors, while repulsion and dislike are said to be associated with aversive social exchanges.

The corollary suggested by this study is that an effort must be made to gain access to the rewarding person and thereby arrange the opportunity to be reinforced by either the presentation of positive stimuli or withdrawal of aversive stimuli or both concurrently. The efforts made to gain access (physical proximity) and opportunity (adequate time together) are called "precurrent behaviors (Skinner, p. 76) and are strengthened when the subsequent interactions are physically or socially gratifying.

The access-opportunity hypothesis proposed here holds that couples must "work" to arrange time to be together and that the frequency and intensity of this work is a function of the on-going reward/cost ratio in their interpersonal interactions as well as each partner's comparison level for alternative sources of reinforcement (Thibaut and Kelley, 1959). For example, if the wife thoroughly enjoys interacting with their toddler (i.e., if she is rewarded by him or her at high rates) but shares few activities and interests with her commuting husband, then she may seldom, if ever, feed the child early and arrange for a babysitter so that she and her husband can have a quiet meal alone together. For a second example, if the husband looks forward to his wife's companionship and enjoys her cooking (i.e., if he is reinforced by her at relatively high rates) he may work diligently during the day ("precurrent behavior") in order to

complete the necessary work from the office so that he can leave promptly at 5 P.M. and not have to bring work home with him. This formulation is indirectly supported by a research study by Birchler (1972).

In a study which compared dyadic interactions of distressed and nondistressed couples, Birchler found that distressed partners exchanged more complaining, criticizing, ignoring, and frowning while showing less agreement, approval, humor, laughing, and smiling. Moreover, the distressed partners did fewer things with their spouses and shared more activities with other people than did the nondistressed couples. Since Birchler studied number of activities rather than duration and frequency of interaction, the support for the access-opportunity hypothesis is based on the assumption that joint activities require time spent together.

The final theoretical implication these data have for the understanding of how the marital relationship functions is the most speculative. The formulation to be presented proposes to reconcile the reciprocity theory of contingent behavior exchange (Azrin, Naster, and Jones, 1973; Patterson and Reid, 1969; and Stuart, 1969) with the most recent "bank account" theory of noncontingent or "unlatched" behavior exchange (Gottman, et al., 1976, p. xviii).

It is postulated that interpersonal interactions are arranged along a continuum as follows:

noncontingent	----	contingent	----	contingent	----	noncontingent
positives		positives		negatives		negative

The ratio of positive to negative interactions is maximum at the noncontingent positives end when approval, attention, and affection are exchanged freely without regard to specific positive behaviors expected or received from the partner. In Gottman's terminology, the "positive code"

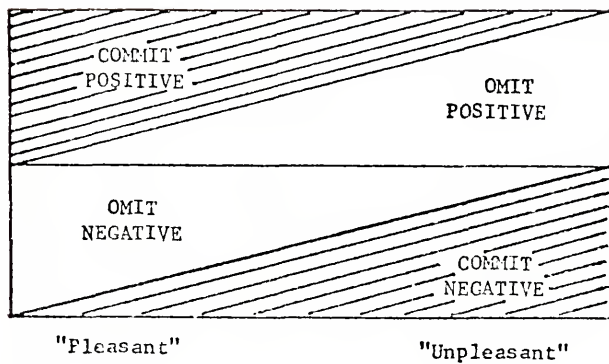


Figure 2.
Theoretical Relationship Among Four
Types of Dyadic Behavior

or deposits in the "bank account" are more than adequate to cover any "negative codes" or withdrawals. He suggests: "It is precisely this lack of contingency in positive interaction that characterizes satisfying and stable nondistressed marriages" (p. xviii). This noncontingent model is supported by case study data from several of the very happy, well-satisfied couples. It is important to note that, contrary to the usual practice of designating marital research couples as either distressed or nondistressed, every effort was made to verify that the nondistressed couples in this study could be designated as happy. The potential participants were sought through peer-referral as being "happily married" and were screened during the pretest interview in their home. Their adjustment and communication scores had to be above average, while their social desirability response bias scores had to be within normal limits (i.e., candid). The resulting group of couples, chosen on the basis of the content of their daily records included five couples who were functioning in the noncontingent positive range (couples A, B, C, E, and G). These couples have been married an average of 30 months, yet might still be described as "honeymooners."

The realization that their interaction was qualitatively different from the other happy couples was prompted by Calvin's comment: "Forms should reflect that pleasant time together may be because (the partners) like being together and not that a certain act made this a pleasant time." The pleasant rating is apparently not contingent on a behavior or on a particular situation or location. The spouse's presence is positive, both as a conditioned stimulus signalling increased opportunity for future pleasant exchanges. In the case study of couple E, Ed's comment echoed

Calvin's: "Sometimes it is hard to pin-point what makes a moment pleasant." The mean of the positive/negative ratios of this group was 104.5 to 1.

The group with the next highest positive/negative ratios on the continuum were characterized by contingent positives or positive reciprocity. The positive/negative ratios for this group averaged 69.4 to 1, although this average was heavily skewed by Isaac's ratio of over 500 to 1 (he refused to consider any time negative). Without his ratio, the average for the group was 21.6 to 1. For the most part the five happy couples in this subgroup (couples D, F, H, I, and J) cited specific positive behaviors as directly influencing their marital satisfaction at a given time (e.g., "he fixed dinner," "I was tired--she let me relax," "He complimented me about losing weight," and "He talked with me at dinner rather than watch TV"). These couples appeared to emit rates of positive behavior higher than the therapy couples but lower than the very happy couples. Moreover, the rate of positives was low enough so that, if an expected positive was omitted, it was noted on the daily recording form ("didn't help clean up dishes," "could have talked to me, showed affection," "he didn't help me out with daughter when I was on the phone"). The qualitative difference between the group characterized by contingent positives and the next group, which is characterized by contingent negatives, is that the unmet expectations are not unrealistic or improbable. Their comments refer to expectations, not wishful thinking.

The contingent negative couples are perhaps best represented by Keith and Karla. Every time he drinks, she nags him about drinking. The behavior of hers that Keith would have found pleasant had such a low probability of occurring that it qualifies as "wishful thinking," not as an expectation: "(she could have) gone with me when I went out." The

contingent negative group is tentatively comprised of couples K, O, P, Q, R, and T, although the exchange patterns are dynamic, not static, and the ratios fluctuate from day to day and week to week. The average positive/negative ratio for this group was 14.8 to 1.

The fourth group is at the negative extreme of the continuum and is characterized by the commission of noncontingent negative behaviors. Rather than the reciprocating negatives, one-for-one, these couples respond negatively to the partner's presence, regardless of his or her behavior. A frequently heard lament is the complaint by the wayward-husband-who-has-reformed that his wife is vindictive whenever she sees him, no matter what he does. His efforts at becoming a "better father" and a "more responsive husband" are shortlived since his attempts are uniformly punished by her negative response to his presence. The couples in this study who were bordering on this type of disequilibrium had average ratios of 4.5 to 1. As stated previously, the wife who asked for a divorce had a ratio of 1 positive to 3.4 negative. The husband who left the study (and his marriage) after three days reported that there had been zero (0) positive interaction, 10 hours 45 minutes of neutral interaction, and 5 hours 30 minutes of negative interaction over the three days. Using Gottman's "bank account" model of noncontingent interaction, these relationships were "overdrawn," if not "bankrupt." Like the noncontingent positive condition, the noncontingent negative condition involves a negative response to the spouse's presence rather than to his or her behavior. The spouse's presence serves as a conditioned stimulus paired with previously painful or aversive interactions and as a discriminative stimulus signalling increased opportunity for retaliatory or vengeful behavior. At best, the atmosphere in the home is tense and

guarded. At worst, there is open hostility.

In summary, it has been postulated that the relatively high rates of both positive and negative behaviors are exchanged noncontingently. The lower rates of both positive and negative behaviors are tracked and exchanged at comparable rates. While there is some evidence to suggest that both positive and negative reciprocity are contingent in the case of certain behaviors (e.g., when he has a beer, she always nags him about drinking), there seems to be insufficient evidence to postulate that all exchanges at this level are quid pro quo. For the higher rates of positive and negative interaction, the triggering stimulus appears to be the person's presence. For the lower rates of positive and negative interaction, the stimulus appears to be the spouse's behavior, although not necessarily the most proximate behavior! These theoretical speculations are suggested by the case studies presented here and are supported by clinical experience. However, the empirical testing of this model awaits future research.

In conclusion, the Marital Satisfaction Time Lines provide a new and incisive tool for the study and treatment of marital relationships. Their value lies in the fact that both the dynamic dimension of time and perceived quality of that time are incorporated into the data collected. The time-lines are directly applicable to use during treatment of dysfunctional marriages. They also furnish a relatively simple and direct method of data collection for research purposes. And finally, analysis of the data they provide, promises to broaden our understanding of the principles of human interaction.

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APPENDICES

APPENDIX A

BACKGROUND INFORMATION FOR RESEARCH PURPOSES

Name _____ Code Number _____
Address _____ Date _____
_____ Phone _____
Age _____ Years married to present spouse _____ Age at marriage _____
Number of children, if any _____ Ages of boys _____ Ages of girls _____
Occupation _____ Hours worked per week _____
Last grade of schooling (or highest degree) _____
Is this your first marriage _____ If not, please describe previous
marriage(s) regarding your age, length of marriage and reason for ter-
mination _____

Did you and your spouse have premarital counseling? _____ If yes, for
how long? _____ From what type of counselor? (e.g., minister, physician,
psychologist, social worker, psychiatrist) _____
Have you and your spouse ever had marriage counseling? _____ If
yes, for how long? _____ Are you currently seeing a counselor?
What type of counselor? (e.g., minister, physician, psychologist, social
worker, psychiatrist, etc.) _____
Are there any adults currently living with you and your spouse? _____
If yes, what is their age and relationship? _____
Did your parents: (a) Remain married _____ (b) Separate _____

(c) Divorce _____ Divorce, then remarry _____?

On a scale of 1 to 9 (1 = Very unhappy, 5 = Happy, 9 = Very happy),
how happy would you say your parents were in their marriage? _____

APPENDIX B

MARITAL ADJUSTMENT SCALE, REVISED (MASR)
WITH MARITAL CONVENTIONALIZATION SCALE (MCS)

_____ Husband

_____ Wife

Date _____

Code No. _____

MARRIAGE QUESTIONNAIRE

1. Have you ever wished you had not married? Frequently _____
Occasionally _____ Rarely.
2. There are times when my mate does things that make me unhappy.
True _____ False _____
3. If you had your life to live over again would you: Marry the same
person _____; Marry a different person _____; Not marry at
all _____.
4. My marriage is not a perfect success. True _____ False _____
5. Do husband and wife engage in outside activities together? All
of them _____; Some of them _____; Few of them _____;
None of them _____.
6. My mate has all of the qualities I've always wanted in a mate.
True _____ False _____
7. In leisure time, which do you prefer?
Both husband and wife stay at home _____
Both to be on the go _____
One to be on the go and the other to stay home _____.

8. If my mate has any faults, I am not aware of them. True _____;
False _____.
9. Do you and your mate generally talk things over together? Never _____;
Now and then _____; Almost always _____; Always _____.
10. My mate and I understand each other completely. True _____;
False _____.
11. How often do you kiss your mate? Every day _____; Now and then _____;
Almost never _____.
12. We are as well adjusted as any two persons in this world can be.
True _____ False _____
13. I have some needs that are not being met by my marriage.
True _____ False _____
14. How many things truly satisfy you about your marriage? Nothing _____;
One thing _____; Two things _____; Three or more _____.
15. Check any of the following items which you think have caused serious
difficulties in your marriage.

Mate's attempt to control
my spending money _____
Other difficulties
over money _____
Religious differences _____
Different amusement
interests _____
Lack of mutual friends _____
Constant bickering _____
Interference of in-laws _____
Lack of mutual affection _____
Unsatisfying sex relations _____
Selfishness and lack of
cooperation _____
Adultery _____

Desire to have children _____
Sterility of husband or wife _____
Venereal diseases _____
Mate became familiar with
another person _____
Desertion _____
Non-support _____
Drunkenness _____
Gambling _____
Ill health _____
Mate sent to jail _____
Other reasons: _____

16. Every new thing I have learned about my mate has pleased me.
True _____ False _____
17. There are times when I do not feel a great deal of love and affection for my mate. True _____ False _____
18. When disagreements arise they generally result in: husband giving in _____; Wife giving in _____; Agreement by mutual give and take _____.
19. I don't think anyone could possibly be happier than my mate and I when we are with one another. True _____ False _____.
20. What is the total number of times you left mate or mate left you because of conflict? No times _____; One or more times _____.
21. My marriage could be happier than it is. True _____ False _____.
22. How frequently do you and your mate get on each other's nerves around the house? Never _____; Occasionally _____; Frequently _____; Almost always _____; Always _____.
23. I don't think any couple could live together with greater harmony than my mate and I. True _____ False _____.
24. What are your feelings on sex relations between you and your mate?
Very enjoyable _____; Enjoyable _____; Tolerable _____;
Disgusting _____; Very disgusting _____.
25. My mate completely understands and sympathizes with my every mood.
True _____ False _____.
26. What are your mate's feelings on sex relations with you?
Very enjoyable _____; Enjoyable _____; Tolerable _____;
Disgusting _____; Very disgusting _____.
27. I have never regretted my marriage, not even for a moment. True _____;
False _____.

APPENDIX C

INSTRUCTIONS FOR MARITAL SATISFACTION TIME LINE

NOTE: Do not write your name on these materials. All data will be coded for confidentiality. These materials are for research purposes only.

Instructions

MARITAL SATISFACTION TIME LINES:

Without consulting your spouse, please mark on the appropriate time line (husband's or wife's), the time intervals that you and your spouse spend in interaction together during the entire day. In this case, "interaction" means at least minimal attention which would exclude time asleep or time watching TV if one spouse is asleep.

In interaction time occurs after midnight and before 6 AM, please note the time interval (e.g., 12:15 A.M. to 1:30 A.M.) and note the positive/negative rating at the bottom of the sheet.

Without consulting your spouse, please color-code the time spent together as positive/pleasant with a RED marker and the negative/unpleasant time with a BLACK marker. Please use the neutral category (GREEN or BLUE) only when it is impossible to rate the time as particularly pleasant or unpleasant.

If the time spent together is not continuous but "on and off" (e.g., while doing the Saturday chores), mark the time segment with hatch marks of the appropriate color (RED, BLACK, or BLUE)

(~~—————~~) and give an estimate of the time together.

At the end of each time period (morning, afternoon, and evening) please describe your spouse's pleasant, neutral and unpleasant behaviors on the lines provided. Please be specific. Describe an observable behavior rather than an abstract quality (e.g., "he brought me a glass of iced tea" NOT "he was very thoughtful.") Please be candid (e.g., "she gave me a neck rub" NOT "she did something nice.")

AT THE END OF THE DAY, SEAL THE COMPLETED SHEETS IN THE ENVELOPES PROVIDED AND MAIL THEM. If you have any questions, call me between 9 A.M. and 9 P.M. at 373-1681.

APPENDIX D

MARITAL SATISFACTION TIME LINE (MSTL)

HUSBAND'S TIME LINE

Pleasant Time Together:

Code Number: _____

Neutral Time Together:

Date: _____

Unpleasant Time Together:

Day of Week: _____

6:00 A.M. | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | NOON

Of the things she did during the PLEASANT time, which behavior was the most POSITIVE for you? _____

During the NEUTRAL time, what could she have done to make your time together more pleasant? _____

During the UNPLEASANT time, what behavior of hers did you find least desirable or pleasant, if any? _____

NOON | 1:00 | 2:00 | 3:00 | 4:00 | 5:00 | 6:00 P.M.

Of the things she did during the PLEASANT time, which behavior was the most POSITIVE for you? _____

During the NEUTRAL time, what could she have done to make your time together more pleasant? _____

During the UNPLEASANT time, what behavior of hers did you find least desirable or pleasant, if any? _____

6:00 P.M. | 7:00 | 8:00 | 9:00 | 10:00 | 11:00 | MIDNIGHT

Of the things she did during the PLEASANT time, which behavior was the most POSITIVE for you? _____

During the NEUTRAL time, what could she have done to make your time together more pleasant? _____

During the UNPLEASANT time, what behavior of hers did you find least desirable or pleasant, if any? _____

APPENDIX E

DAILY RATING SCALES

Please check one:

Husband _____

Wife _____

Code Number _____

Date _____

Day of Week _____

On the scale from 1 to 9 below, please circle the number which best indicates the degree of unhappiness/happiness you experienced in your marital relationship TODAY.

Very	1	2	3	4	5	6	7	8	9	Very
Unhappy										Happy

On the scale from 1 to 9 below, please circle the number which best indicates the degree of unhappiness/happiness you experienced in your work TODAY.

Very	1	2	3	4	5	6	7	8	9	Very
Unhappy										Happy

On the scale from 1 to 9 below, ranging from very bad to very good, please circle the number which best describes how you felt about yourself TODAY.

Very	1	2	3	4	5	6	7	8	9	Very
Bad										Good

On the scale from 1-9 below, ranging from very bad to very good, please circle the number which best describes how your spouse felt about himself or herself TODAY.

Very	1	2	3	4	5	6	7	8	9	Very
Bad										Good

Comments: _____

APPENDIX F

LEISURE ACTIVITY INTERACTION INDEX

Code No.: _____

Date: _____

Below is a list of activities, some of which you participated in over this past weekend. Using the records that you kept for these days, estimate in the appropriate columns the approximate number of hours and minutes that you actually spent this past Friday, Saturday, and Sunday in these activities. Do not include that time in which an activity was not primary. For example, time spent listening to the radio while you work or read should not be listed.

Two examples are given below for illustration only.

POTENTIAL LEISURE ACTIVITIES	Participation (hours and minutes)			
	Alone	With Spouse	With Others (but not spouse)	With Spouse and Others
Examples:				
Reading books: Fiction	3h & 15m	--	--	--
Visiting friends	--	4-1/2 hrs.	2h 45m	--
Shopping for pleasure (not required)	_____	_____	_____	_____
Going to the library	_____	_____	_____	_____
Attending race tracks (dogs, horses)	_____	_____	_____	_____
Going to park or playground	_____	_____	_____	_____
Visiting museum or gallery	_____	_____	_____	_____
Visiting zoo or junior museum	_____	_____	_____	_____
Attending movie theatre	_____	_____	_____	_____
Attending drive-in theater	_____	_____	_____	_____
Spending time in tavern, night- club, or lounge	_____	_____	_____	_____
Attending wrestling or boxing match	_____	_____	_____	_____
Visiting amusement parks	_____	_____	_____	_____
Attending parties	_____	_____	_____	_____
Attending athletic events as spectator	_____	_____	_____	_____
Picnicking away from home	_____	_____	_____	_____
Eating meals away from home	_____	_____	_____	_____
Visiting friends	_____	_____	_____	_____
Riding in car for pleasure	_____	_____	_____	_____
Caring for pets	_____	_____	_____	_____
Studying nature	_____	_____	_____	_____
Collecting (Stamps, coins, etc.)	_____	_____	_____	_____
Gardening & yard work for pleasure)	_____	_____	_____	_____

Potential Leisure Activities:Participation (hours & minutes):

	<u>Alone</u>	<u>With Spouse</u>	<u>With Others</u> <u>(but not</u> <u>Spouse)</u>	<u>With Spouse</u> <u>and Others</u>
Tinkering in home workshop				
Participating in photography				
Constructing models				
Writing poems, stories				
Weaving, fancy needlework, knitting				
Art modeling, painting, drawing				
Sewing for pleasure				
Writing letters				
Reading books: non-fiction				
Reading books: fiction				
Playing musical instruments				
Listening to records or tapes				
Reading magazines or newspapers				
Watching television				
Listening to the radio (primary activity)				
Playing billiards or pool				
Playing basketball, baseball, volleyball				
Playing tennis or racquetball				
Water skiing				
Bowling				
Sailing				
Motor boating				
Flying for pleasure				
Skin or scuba diving				
Playing handball				
Boxing, wrestling, judo, etc.				
Attending organized camps				
Going on hay ride				
Playing badminton				
Playing shuffleboard				
Riding (horses)				
Playing miniature golf				
Playing golf				
Camping (in organized areas)				
Camping (backwoods)				
Roller Skating				
Bicycling for pleasure				
Motorcycling for pleasure				
Fishing				
Playing backyard or lawn games				
Swimming				
Dancing or attending dances				
Playing football				
Hunting				
Hiking				

Potential Leisure Activities:

Participation (hours & minutes):

	<u>Alone</u>	<u>With Spouse</u>	<u>With Others</u> (but not spouse)	<u>With Spouse</u> <u>and Others</u>
Canoeing, rowing				
Playing pencil & paper games (crossword puzzles, etc.)				
Playing bridge				
Playing poker				
Playing card games other than bridge or poker				
Playing board games				
Playing ping-pong				
Attending musical concerts, opera				
Attending lectures, debates, forums				
Attending plays or other drama				
Taking part in amateur dramatics				
Taking part in debates, dis- cussion group				
Attending craft or adult edu- cation class				
Taking college classes				
Attending fraternal organiza- tion meeting				
Participating in community service work				
Attending community social events				
Attending church suppers				
Attending family or club reunions				
Attending parties or socials outside home				
Taking part in PTA activities				
Taking part in political activities				
Attending church				
Playing informally with children				
Engaging in affectional or sexual activity				
Talking on telephone for pleasure				
Entertaining friends				
Engaging in casual conversation				
Taking naps or just relaxing				
Creatively cooking (beyond meal preparation)				
OTHER ACTIVITIES not listed above: (please give specific activity)				

1. People sometimes participate in activities they really do not enjoy. If any of the hours you listed above reflects this feeling, please circle them.
2. Now, go back over the previous list of activities and select five (5) activities that you enjoy the most, even if you did not participate in them last weekend. In the spaces below, RANK these five activities by placing your favorite after Number 1., the next favorite after Number 2, and so on. You may also include activities that are not on the previous list. Check with whom, if anyone, you prefer to spend the activity.

	<u>ACTIVITY:</u>	<u>PREFERRED PARTICIPATION</u>			
		<u>Alone</u>	<u>With Spouse</u>	<u>With Others</u> (but not spouse)	<u>With Spouse</u> <u>and Others</u>
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____

THANK YOU!

APPENDIX G
RESEARCH RELEASE FORM

We hereby agree to participate in the research study on the quality and quantity of husband-wife interaction. We understand that this study is being conducted by Ann Marie Williams from Clinical Psychology at the University of Florida as her doctoral research project and that all information and data collected will be used for research purposes only. We hereby authorize Mrs. Williams to use our test data and personal information in her research. We further understand that our names and other personal identifying information will not be revealed and will be held in strict professional confidence.

(Mrs.) _____

(Mr.) _____

Date: _____

Ann Marie Williams, M.A.
Research Director

APPENDIX H

RELEASE OF INFORMATION TO SPOUSE

I (would) (would not) like the general test results and description of daily marital interaction collected as part of Mrs. Williams' doctoral research project to be shared with my husband during the final interview meeting with Mrs. Williams.

(Mrs.) _____

Date: _____

I (would) (would not) like the general test results and description of daily marital interaction collected as part of Mrs. Williams' doctoral research project to be shared with my wife during the final interview meeting with Mrs. Williams.

(Mr.) _____

(Date: _____

Witness: _____

Ann Marie Williams, M.A.

APPENDIX I

RELEASE OF INFORMATION TO MARITAL THERAPIST

We hereby request that the information and research data collected from us as participants in the study of the quantity and quality of husband-wife interaction by Ann Marie Williams be shared with our marital therapist, _____, at _____. We understand that this information has been collected for research purposes only and cannot be shared with our therapist or counsellor without this express written consent.

(Mrs.) _____

(Mr.) _____

Date: _____

Therapist: _____

Ann Marie Williams, M.A.
Research Director

APPENDIX J

REACTION SHEET

Code No.: _____

Date: _____

1. What would you change on the daily recording forms to make them more informative, easier to complete, or otherwise improve them?

2. Would you recommend a daily recording project like this to any of your married friends? Yes _____: No _____. For what purpose?

3. On the scale from 1 to 7 below, please rate how beneficial or not the recording procedure has been for your marital relationship:

DETRIMENTAL 1 2 3 4 5 6 7 BENEFICIAL

4. On the scale from 1 to 7 below, please rate your degree of interest
or lack of interest in participating in this marital research project:

BORING 1 2 3 4 5 6 7 VERY INTERESTING

5. On the scale from 1 to 7 below, please indicate to what extent participating in this marriage research project has affected problems between you and your spouse:

MADE PROBLEMS

1 2 3 4 5 6 7

SOLVED
PROBLEMS

6. Other comments: _____

THANK YOU FOR YOUR HELP!

APPENDIX K

DEMOGRAPHIC CHARACTERISTICS OF HAPPY COUPLES

Name	Age	A.M. ^a	L.M. ^b	Number of Children	Age(s)	Student Status	Occupation
Alex	21	20				Grad. Stud.	--
Alice	21	20	17	--	--	--	Secretary
Burt	34	30				--	Surg. Resident
Brigid	29	26	42	--	--	--	Wife
Calvin	23	21				Dental Stud.	--
Cleo	23	21	29	--	--	--	Bank Clerk
Darren	24	22				--	Tennis Teacher
Doris	20	18	18	--	--	--	Secretary
Ed	23	21				Grad. Stud.	--
Edith	21	20	18	--	--	Student	--
MEAN	23.9	21.9	24.8				
Fred	27	23				Student	Construction
Fran	24	20	50	1	4 mos.	--	Wife and Mother
Gerry	28	24				--	Lab Tech.
Georgia	25	21	44	2	25 mos.	--	P. E. Coach
Harold	26	22				--	Agri-Business
Helen	26	22	42	1	18 mos.	--	Wife and Mother

Name	Age	A.M. ^a	L.M. ^b	Number of Children	Age(s)	Student Status	Occupation
Isaac	25	21	56	1	18 mos.	--	Graphic Designer
Ilene	24	19				--	Wife and Mother
Jeff	24	22	30	1	21 mos.		Registered Tech.
Jennifer	22	19				--	Wife and Mother
MEAN	25.1	21.3	44.4				

^aAge at Marriage

^bLength of Marriage in Months

APPENDIX L

DEMOGRAPHIC CHARACTERISTICS OF THERAPY COUPLES

Name	Age	A.M. ^a	L.M. ^b	Number of Children	Age(s)	Student Status	Occupation
Keith	26	24				Student	--
Karla	25	23	29	--	--	Part-time Student	--
Leo	21	19				Student	--
Lauren	20	18	17	--	--		Bank Clerk
Mike	26	23				--	Carpenter
Maureen	22	20	26	--	--	Noncredit Courses	Babysitter
Nick	25	23				Law Stud.	Part-time Librarian
Nora	26	24	24	--	--	--	Full-time Librarian
Oscar	27	26				--	Pharmacist
Opal	23	22	18	--	--	Graduate Student	--
MEAN	24.1	22.2	22.8				
Peter	29	24				--	Heavy Equipment Operator
Paula	24	20	53	1	18 mos.	--	Wife and Mother
Quincy	27	21				Student	--
Queena	27	21	70	1	16 mos.	--	Wife and Mother

Name	Age	A.M. ^a	L.M. ^b	Number of Children	Age(s)	Student Status	Occupation
Roy	33	28	68	2	21 mos.	--	Public Relations
Roberta	29	23			38 mos.	--	Teacher
Sam	30	25	68	1	48 mos.	--	Teacher
Sara	29	24				Student	--
Tim	21	18	44	1	17 mos.	Student	--
Tammy	21	18				--	Insurance Clerk
MEAN	27.0	22.2	59.8				

^aAge at Marriage

^bLength of Marriage in Months

APPENDIX M

MARITAL SATISFACTION TIME LINE, REVISED

Very Pleasant ++

Pleasant +

Neutral o

Unpleasant -

Very Pleasant --

Initials _____

Date _____

HUSBAND'S TIME LINE

Weekday _____

6:00	7:00	8:00	9:00	10:00	11:00	NOON
++						++
+						+
o						o
-						-
--						--

Of the things she did during the PLEASANT TIME, which behavior was the most POSITIVE for you? _____

During the NEUTRAL time, what could she have done to make your time together more pleasant? _____

During the UNPLEASANT time, what behavior of hers did you find least desirable or pleasant, if any? _____

M
O
R
N
I
N
G

NOON	1:00	2:00	3:00	4:00	5:00	6:00 P.M.
++						++
+						+
o						o
-						-
--						--

Of the things she did during the PLEASANT time, which behavior was the most POSITIVE for you? _____

During the NEUTRAL time, what could she have done to make your time together more pleasant? _____

During the UNPLEASANT time, what behavior of hers did you find the least desirable, if any? _____

A
F
T
E
R
N
O
O
N

6:00 P.M. 7:00 8:00 9:00 10:00 11:00 MIDNIGHT

++																			++
+																			+
o																			o
--																			--

Of the things she did during the PLEASANT time, which behavior was the most POSITIVE for you? _____

During the NEUTRAL time, what could she have done to make your time together more pleasant? _____

During the UNPLEASANT time, what behavior of hers did you find least desirable, if any? _____

E
V
E
N
I
N
G

BIOGRAPHICAL SKETCH

The author was born May 16, 1948, in Cleveland, Ohio. She was Valedictorian at Bishop Verot High School in Fort Myers, Florida, in June, 1966. She graduated with Honors from the University of Florida in 1970 with a Bachelor of Arts Degree in Psychology. She continued at the University of Florida and earned her Master of Arts Degree in Psychology in December, 1971. She worked as a research assistant in the College and Married Life Project at the University of Florida Student Health Service, 1969-1971. She also worked as a research assistant and psychological consultant to the Florida Family Planning Program in 1972. She was appointed a Level III Trainee and served as a Clinical Psychology intern from September, 1973 to September, 1974, at the Veterans Administration Hospital in Gainesville, Florida.

She is currently residing with her husband in Philadelphia where she works as a researcher and as a counselor at the Marriage Council of Philadelphia, Inc. She is also an Instructor in Psychiatry at the University of Pennsylvania School of Medicine.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Audrey S. Schumacher, Chairperson
Professor Emeritus of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Mark K. Goldstein, Cochairperson
Assistant Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Mary H. McCaulley
Assistant Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Franz R. Epting
Associate Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Merle E. Meyer
Professor and Chairman of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Felix M. Berardo
Professor of Sociology

This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Arts and Sciences and the the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

June 1977

Dean, Graduate School

UNIVERSITY OF FLORIDA



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